3(b), 2(b)

SCREENING SITE INSPECTION REPORT
FOR
CANTON DROP FORGE & MFG. COMPANY
CANTON, OHIO
U.S. EPA ID: OHD004465142
SS ID: NONE
TDD: F05-9004-001
PAN: FOH0625SA

APRIL 8, 1991

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International Specialists in the Environment

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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Canton Drop Forge & Mfg. Company (CDF) site under contract number 68-01-7347.

The site was initially discovered when Canton Drop Forge and Manufacturing submitted a Resource Conservation and Recovery Act (RCRA) Notification Form 3001 as a Generator of Hazardous Waste on August 8, 1980. The site came to the attention of the Ohio Environmental Protection Agency (OEPA) during a June 30, 1983 site inspection conducted in response to a complaint about buried drums and sludge on-site.

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Pam Wicks of the Ohio Division of Solid Hazardous Waste Management (ODSHWM) and is dated June 6, 1985.

FIT prepared an SSI work plan for the CDF site under technical directive document (TDD) F05-8706-232, issued on June 19, 1987. The SSI work plan was approved by U.S. EPA on February 14, 1990. The SSI of the CDF site was conducted on May 16, 1990, under TDD F05-9004-001, issued on April 10, 1990.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of nine soil/sediment samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and the reconnaissance inspection of the site.

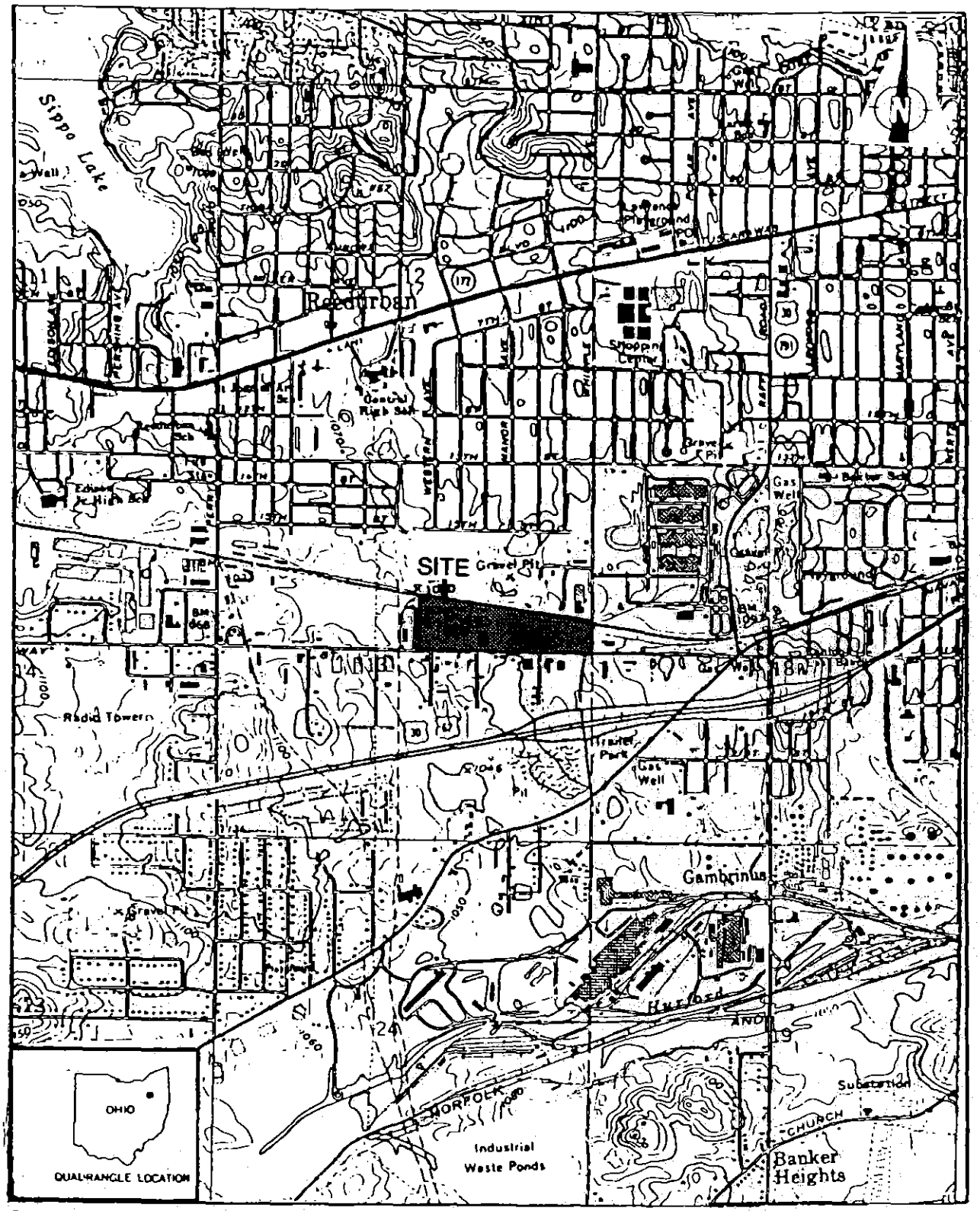
2.2 SITE DESCRIPTION

The CDF site is an active drop forge and manufacturing plant that currently manufactures parts for airplane, locomotive, and off-road transportation. The site is located at 4575 Southway SW, Stark County, Canton, Ohio (SW1/4NE1/4, sec. 13, T.10N., R.9W.). The CDF site is located in a manufacturing and urban area of Canton (see Figure 2-1 for site location). The CDF site is approximately 25 acres in size. The manufacturing plant occupies 6 of the site's 25 acres of land. An on-site landfill for manufacturing-derived wastes is located on 8 acres of the site. The remaining 11 acres of the site are used as parking and storage areas.

A 4-mile radius map of the CDF site is provided in Appendix A.

2.3 SITE HISTORY

The Canton Drop Forge and Manufacturing plant began operation in 1945. The site was owned by the United States Army Air Corps (U.S. AAC). Canton Drop Forge and Manufacturing operated the site for U.S. AAC. The manufacturing plant forged airplane propeller hubs. It is not known what the land was used for, nor who owned the site prior to U.S. AAC (Bressanelli et al. 1990).



SOURCE: USGS, Canton West, OH Quadrangle, 7.5 Minute Series, 1967 Photorevised 1978 .

SCALE
0 0.5 1 MILE

FIGURE 2-1 SITE LOCATION

In 1950, Canton Drop Forge and Manufacturing bought the site from U.S. AAC and continued on-site operations. In 1981, the Corder Group bought the CDF site and is the current site owner and operator (Bressanelli et al. 1990).

From 1950 to the present, various drop-forged parts for airplane, locomotive, and off-road transportation have been manufactured on-site. The manufacturing process, called drop forging, begins with the selection of feedstock. The feedstocks are composed of different types of steel alloys, such as carbon, nickel, and titanium. The feedstock is then cut to size and heated to 1,700 to 2,400° F. A steam-driven hammer forges the piece into the desired shape as formed by a die. Lubricating oils are used to coat the dies. The drop-forged product may then be heat-treated and cooled by quench oils or cleaned by shot blasting or grit cleaning. Prior to 1981, pickle liquor was used for scaling the steel. A small amount of grinding may be done on the product, or the product may be quality-tested. The tests performed on the product are magnaflux or zyglow, which are described as nondestructive. The product is then shipped to the customer (Bressanelli et al. 1990).

The on-site plant currently has 40 air permits for various plant operations (Bressanelli et al. 1990). Appendix B includes the various permit numbers, descriptions, issuing dates, and expiration dates.

Various waste disposal practices were used at the CDF site, including on- and off-site landfilling, collection of process water and oils in lagoons, and the reclaiming of waste oils and sludge.

The on-site landfill was licensed by the Stark County Health Department (SCHD) in June 1976 (Bozerke 1977). The license number is not known. It is not known when the landfill began operating. Canton Drop Forge and Manufacturing closed the landfill in 1979 because it had reached its capacity. The on-site landfill was approximately 8 acres in size and was located in a natural depression east of the plant buildings. The landfill was divided into two zones, Zone A and Zone B. A scrap and salvage area was located in the middle of the landfill. Zone A was closed in October 1978, and Zone B in 1979 (Bressanelli et al. 1990). According to file information, a discrepancy exists regarding

the closing date of Zone B. File information indicates that the landfill was still being used in late 1981. Canton Drop Forge and Manufacturing petitioned OEPA for an order of exemption under R.C. Section 3734.02(G) for the disposal of brickbats, concrete, and wood pallets on June 3, 1981 (OEPA 1981). OEPA granted the company's petition in a Director's Final Findings and Orders on October 15, 1981 (OEPA 1981a).

The landfilling method used on-site was the dump and cover method. Cover material for the landfill included slag, ash, lime/soda softener sludge, and demolition wastes (Cavender 1978). According to Jerome P. Bressanelli, President of Canton Drop Forge and Manufacturing, the landfill was covered with a clay soil of unknown thickness. Zone A of the landfill was used for the disposal of all wastes generated on-site. These wastes included oil sludge and waste oil in 55-gallon drums, demolition wastes (bricks and concrete), slag, ashes, lime/soda softener sludge, boiler stack scrubber sludge (gypsum), floor sweepings, trash, and rags (Cavender 1978). Zone B of the landfill was used for the disposal of demolition wastes, concrete, and other exempt wastes. These wastes were piled around Lagoon #3, one of three on-site lagoons (Cavender 1978).

In 1981, wastes generated on-site were hauled from the site by the following waste transporters: Buckeye Sanitation of Canton, Ohio (general trash); Carl Pandoli of Canton, Ohio (scrubber sludges); and R. E. Slutz Trucking of Canton, Ohio (ashes). All three transporters dumped at Breitenstine Landfill in Waynesburg, Ohio. Reclaimable oil was picked up by Northway Environmental Services of Ashtabula, Ohio, and was transported to one of three different sites. The sites were located in Harpersfield, Cleveland, and Waynesburg (Breitenstine Landfill), all in Ohio. Pickle liquor was picked up by Industrial Wastes Corporation of New Brighton, Pennsylvania, and dumped at a location in Darlington Township, Pennsylvania (OEPA 1981b). In 1990, wastes generated on-site were hauled from the site by the following waste transporters: Browning Ferris Industries of Akron, Ohio (general trash), and Advance Drain and Sewer of Wooster, Ohio (scrubber sludges) (Bressanelli et al. 1990).

A scrap and salvage area was located in the middle of the landfill area. This area was used to store scrap metal, old machinery, and other

salvageable materials. The scrap is sold whenever the market price is high (Cavender 1978; Bressanelli et al. 1990).

There are three man-made lagoons at the CDF site that are used to collect and treat plant process water. Used process water containing spent lubricating oil is dumped into Lagoon #1, where some of the oil is then skimmed off the water and collected in a 2,000-gallon tank. The lubricating oil is used to lubricate dies (Bressanelli et al. 1990). The water is then pumped via an underground pipe to Lagoon #2, where the rest of the oil is skimmed off the water. The waste oil is collected in two 2,000-gallon tanks. The water is then pumped through another underground pipe to Lagoon #3 for evaporation and infiltration. Lagoon #1 is located in the southwest corner of the site. Lagoons #2 and #3 were excavated from and are located in the landfill area (Cavender 1978). It is not known from what type of material Lagoon #1 was excavated. None of the lagoons were lined (Bressanelli 1990).

Beginning in 1976, Canton Drop Forge and Manufacturing was required by both SCHD and OEPA to file solid waste disposal operation reports for the on-site landfill and to apply for a landfill license (Bozerke 1977; Cavender 1978; Bressanelli et al. 1990). Canton Drop Forge and Manufacturing submitted a RCRA 3001 Notification as a Generator of Hazardous Waste for its F010 quench oil sludge on August 8, 1980. The F010 quench oil sludge was later reclassified to include only those oils that contain cyanide. The quench oil used on-site in the manufacturing process does not contain cyanide.

The company filed a petition on June 3, 1981, with OEPA requesting an order of exemption under R.C. Section 3734.02(G) for the disposal of brickbats, concrete, and wood pallets in the on-site landfill. OEPA granted the exemption in a Director's Final Findings and Orders on June 15, 1983 (OEPA 1981a).

OEPA conducted a site inspection of the CDF site on June 30, 1983, in response to a complaint regarding buried drums and sludges. OEPA officials observed 15 to 20 partially exposed and leaking drums buried along the edges of Lagoon #2. The drums were buried in the late 1960s. OEPA recommended that Canton Drop Forge and Manufacturing cover the

sides of Lagoon #2 with 2 feet of compacted clay-type material (OEPA 1983). No drums were observed in the pit lagoons during the FIT SSI. The fate of these drums is not known. FIT did not collect any soil samples because the exact location of the exposed drums was not known.

No additional enforcement actions regarding the CDF site had taken place as of the date of the SSI.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the CDF site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures.

Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan with one exception. Nine soil/sediment samples were collected instead of the 10 soil/sediment samples proposed in the work plan. FIT believed that 9 soil/sediment samples were adequate to characterize the CDF site.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the CDF site is provided in Appendix C.

3.2 SITE REPRESENTATIVE INTERVIEW

John Nordine, FIT team leader, conducted an interview with Jerome P. Bressanelli, President; Larry Stalnaker, Manufacturing manager; and Ed England, Personnel Manager, all with Canton Drop Forge and Manufacturing. Fred Zollinger and Stephen Reilly, attorneys with Day, Ketterer, Raley, Wright, and Rybolt, representing Canton Drop Forge and Manufacturing, were also present at the interview. The interview was conducted on May 16, 1990, at 8:30 a.m. on-site at the plant office located at 4575 Southway St. SW, in Canton, Ohio. Henry Adamiak of FIT also attended the interview. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the CDF site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection began on May 16, 1990, at 10:00 a.m., and included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection. FIT was accompanied by Stalnaker, England, Reilly, and Don Lenk of Wadsworth Alert Labs, Inc., during the reconnaissance inspection.

Reconnaissance Inspection Observations. The CDF site is located in the southwest section of Canton, Ohio. Land use surrounding the CDF site is industrial and residential. Penn Central Railroad tracks and a gravel pit operation are located immediately north of the site (see Figure 3-1 for site features). Industries are located to the east, west, and south of the site. Residential areas are located 1/4 mile north, east, and west of the site.

The site is completely surrounded by a 10-foot-high chain link fence with three strands of barbed wire on top. There are two entrances to the CDF site, both located on Southway St. SW. There was a 24-hour guard on duty during the FIT SSI.

There are five buildings located on the CDF site. The largest building, located in the western portion of the site, is used for manufacturing purposes. The remaining buildings are located in the west-central portion of the site and immediately north and south of the manufacturing building. These buildings include the power house, chip house, die shop, and office building. The manufacturing building is divided into three departments: a drop forge area in the middle, an upsetter area in the building's west wing, and a grinding and shipping area in the east wing. Two die stacks were located in the northwest corner of the site, with stained soil observed near one of the stacks. A water tank is located north of the chip house. A lime tank was located near the power house. Four buried, 25,000-gallon tanks used for the storage of fuel oil and other bulk liquids were located west of the

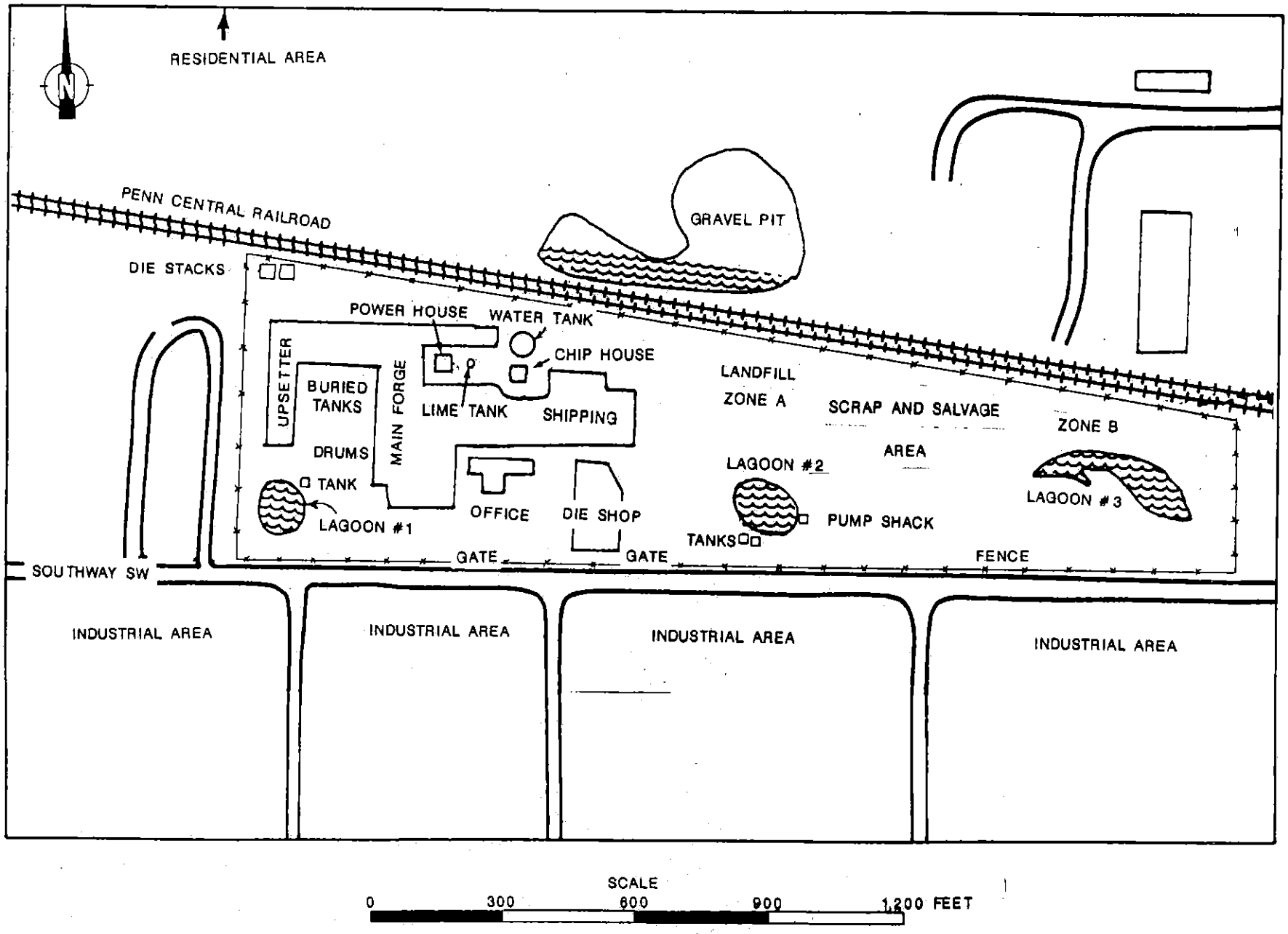


FIGURE 3-1 SITE FEATURES

drop forge area of the manufacturing building. Approximately 20, 55-gallon drums of lubricating oil were stored on a concrete pad just south of the buried tanks. The drums appeared to be in good condition.

Lagoon #1 is located in the southwest corner of the site. Lagoon #1 is approximately 100 feet in diameter. FIT observed an oily sheen on the water in Lagoon #1. The ground around Lagoon #1 appeared to be covered with black ash or cinders. This lagoon is used to skim waste oil from process water. Skimmed waste oil is collected in a 2,000-gallon tank immediately northwest of the lagoon. Water from Lagoon #1 is then pumped into Lagoon #2, which is located approximately 300 feet east of the die shop. Lagoon #2 is oval shaped and is approximately 100 feet by 125 feet in diameter. Lagoon #2 is the second stage of the water treatment process. Water in Lagoon #2 had oil floating on it. The banks of Lagoon #2 were coated with oil sludge. An oil skimmer is used to collect the rest of the oil from the water surface. Waste oil is then pumped into two 20,000-gallon tanks. Water from Lagoon #2 is then pumped into a third lagoon (Lagoon #3). A pump shack was located on the east edge of Lagoon #2. Piles of oily, scale-type material were located northwest of Lagoon #2. Lagoon #3 is located in the eastern half of the site and is crescent shaped. Lagoon #3 is used for the filtration of processed wastewater. Water in some areas of the lagoon had an oily sheen.

The on-site landfill is located in the eastern half of the site and is approximately 18 acres in size. The landfill is divided into a Zone A and a Zone B, with a scrap and salvage area between the two zones. The landfill had a fresh clay soil cap. The parts of the landfill that did not have a fresh cover appeared to be covered with black cinders and ash.

Piles of iron and steel are stored in the scrap and salvage area until the price of the materials is high enough to justify being sold. Dies and other used machinery were also observed in this area.

FIT photographs from the SSI of the CDF site are provided in Appendix D.

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or Target Analyte List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix E. Portions of the samples were offered to and accepted by the site representatives.

Soil/Sediment Sampling Procedures. Sediment sample S1 was collected from the east bank of Lagoon #1 (see Figure 3-2 for soil/sediment sampling locations). Soil sample S2 was collected from an oily pile of scales or cinders near Lagoon #1. Soil sample S3 was collected from the stained soil near one of the die stacks in the northwest corner of the site. Soil sample S4 was collected from an oily area in a low area east of Lagoon #3. Sediment sample S5 was collected from the west bank of Lagoon #3. Soil sample S6 was collected in an area of stained soil north of Lagoon #2 where the clay soil cap had not been applied on the landfill. Soil sample S7 was collected from the bank of Lagoon #2 near the pump shack. Soil sample S8 was collected from an area of stained soil near the scrap and salvage area. Soil sample S9 was collected as a potential background sample from a grassy area located between the office and the manufacturing buildings. All sediment samples were collected from oil-stained areas on the banks of the lagoons. All soil/sediment samples were surface samples and were collected with a trowel.

Standard E & E decontamination procedures were adhered to during the collection of all soil/sediment samples. The procedures included the scrubbing of all equipment (e.g., gloves, trowels, and bowls) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil/sediment samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil/sediment samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP).

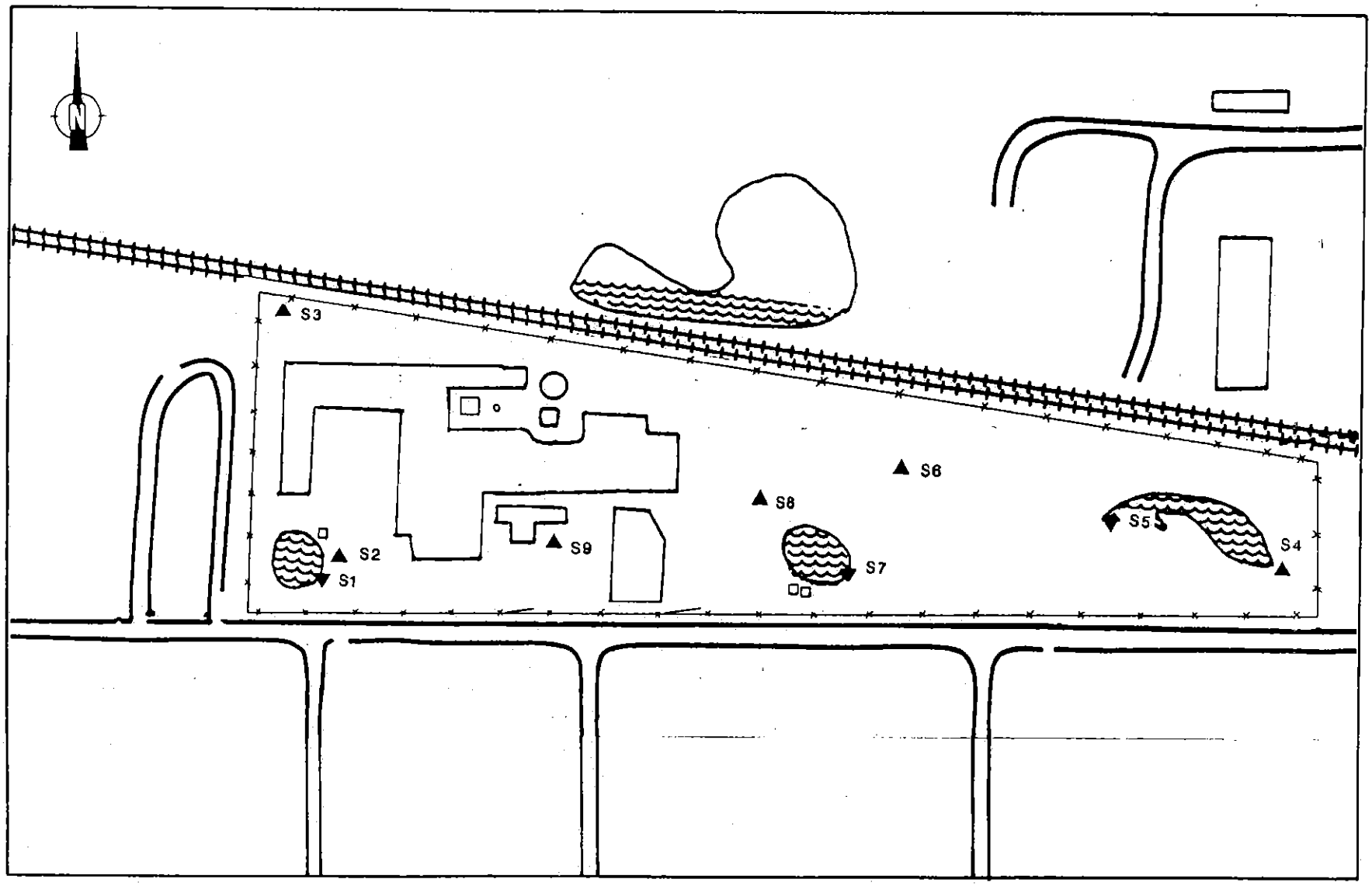


FIGURE 3-2 SOIL/SEDIMENT SAMPLING LOCATIONS

4. ANALYTICAL RESULTS

This section presents results of the chemical analysis of FIT-collected soil/sediment samples for TCL compounds and TAL analytes. All samples were analyzed for volatile organics, semivolatile organics, pesticides/polychlorinated biphenyls (PCBs), metals, and cyanides. Complete chemical analysis results of FIT-collected soil/sediment samples are provided in Table 4-1. In addition, significant tentatively identified compounds (TICs) detected in the analysis of FIT-collected samples are also provided in Table 4-1.

Quantitation/detection limits used in the analysis of soil/sediment samples are provided in Appendix E.

The analytical data for the chemical analysis of soil/sediment samples collected for this SSI have been reviewed by U.S. EPA for compliance with terms of CLP, and the review has been approved by U.S. EPA. The analytical data have also been reviewed by FIT for validity and usability. Any additions, deletions, or changes to the data have been incorporated in the chemical analysis results tables presented in this section.

Sample Collection Information and Parameters	S8	S9
Date	5/16/90	5/16/90
Time	1450	1315
CLP Organic Traffic Report Numb	EEN60	EEN61
CLP Inorganic Traffic Report Nu	MEEQ60	MEEQ61
Compound Detected (values in ug/kg)		
Volatile Organics		
methylene chloride	--	--
1,1,1-trichloroethane	--	--
toluene	--	--
ethylbenzene	--	--
xylenes (total)	--	--
Semivolatile Organics		
benzoic acid	--	--
naphthalene	--	--
2-methylnaphthalene	--	--
fluorene	--	--
phenanthrene	--	--
di-n-butylphthalate	--	--
fluoranthene	--	770
pyrene	--	690
benzo[a]anthracene	--	390J
chrysene	--	530
bis(2-ethylhexyl)phthalate	--	--
benzo[b]fluoranthene	--	310J
benzo[k]fluoranthene	--	280J
TICs†		
hexanone,4-ethyl-2-methyl (3074-75-7)	--	--
benzene,1-ethyl-3-methyl (620-19-4)	--	--
benzene,1,3,5-trimethyl (108-67-8)	--	--
11H-benzo[a]fluorene (238-34-6)	--	--
phenanthrene,2,5-dimethyl (3674-66-6)	--	--
benzo[j]fluoranthene (205-82-3)	--	400J
benzo[e]acephenanthrylene (205-99-2)	--	400J

Table 4-1 (Cont.)

Sample Collection and Parameters	S7	S8	S9
naphthalene,1,3-di (575-41-7)	--	--	--
decane (124-18-5)	--	--	--
nonane,2,6,-dimetl (17302-28-2)	--	--	--
hexane,2,3,4-trim (921-47-1)	--	--	--
decane,2-methyl- (6975)	--	--	--
undecane,4,7,-dim (17301-32-5)	--	--	--
undecane,2-methyl (7045-71-8)	--	--	--
octane,2,3,7-trim (62016-34-6)	--	--	--
hexadecane (544-76-3)	1,000J	3,000J	--
dodecane,2,7,10-t (74645-98-0)	--	--	--
sulfur, mol. (S8 (10544-50-0)	--	--	--
2(5H)-furanone,5 (20019-64-1)	--	--	--
2-cyclohexen-1-o (930-68-7)	--	--	--
ethanois, 1-phen (98-86-2)	900J	--	--
heptadecane (629-78-7)	2,000J	1,000J	--
Analyte Detecte (values in mg/k			
aluminum	9,780	2,710	11,500
antimony	--	50.6NJ	11.4BNJ
arsenic	16.6*J	35.6*J	19.3+*J
barium	197	50.1	121
beryllium	--	--	0.41B
cadmium	--	--	--
calcium	2,530	4,030	3,670
chromium	53.8	405	37.9
cobalt	10.9BNJ	62.1NJ	16NJ
copper	87.7EJ	572EJ	31.6EJ
iron	26,300	114,000	30,500
lead	71.6	1,130+J	61.6
magnesium	1,680	758	2,410
manganese	409	1,050	1,140

Table 4-1 (Cont.)

Sample Collection Informatic and Parameters	S8	S9
mercury	--	0.15
nickel	1,550	69.2
potassium	261B	1,340
selenium	--	0.53B
silver	--	--
sodium	120B	78.5B
thallium	--	--
vanadium	23.4	25.5
zinc	107	114
cyanide	--	--

-- Not detected.
† TIC Chemical Abstracts Se

Table 4-1 (Cont.)

COMPOUND QUALIFIE	INTERPRETATION
J	value may be semiquantitative.
B	value may be semiquantitative if x the blank concentration (<10x k concentrations for common laboratory s: phthalates, methylene chloride, toluene, 2-butanone).

ANALYTE QUALIFIE	INTERPRETATION
E	or element was not detected, or y be semiquantitative.
N	y be quantitative or semi- tive.
*	y be quantitative or semiquantitative.
+	ue may be biased.
B	y be quantitative or semi- tive.
J	y be semiquantitative.
W	y be semiquantitative.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the CDF site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

Groundwater sampling was not conducted at the CDF site because no monitoring wells were installed at the site. However, a potential exists for TCL compounds and TAL analytes to migrate from the site to groundwater in the vicinity of the site, based on the following information.

- TCL compounds and TAL analytes were detected in on-site soil/sediment samples, including xylenes (total) (140J µg/kg in S2), phenanthrene (4,000 µg/kg in S7), chromium (405 mg/kg in S8), and nickel (1,550 mg/kg in S8).

- Several TICs were detected in the soil/sediment samples.

- The three on-site lagoons are unlined, and Lagoon #2 and Lagoon #3 were excavated from landfill material (Bressanelli et al. 1990).

- The landfill is not lined (Bressanelli et al. 1990).

- Fifteen to 20 drums of used lubricants were buried in the landfill and some of the drums were observed to be leaking (OEPA 1983).

The potential for migration of TCL compounds and TAL analytes to area groundwater is also based on the following geological information.

The geology of the site area consists of unconsolidated glacially derived deposits that overlie sedimentary bedrock. The glacially derived deposits in the site area have been identified as till deposited during the Pleistocene epoch, Wisconsinan age. The till is an unsorted, unstratified mixture of sand, silt, and clay containing pebbles, cobbles, and boulders (DeLong and White 1963).

Well logs of the area indicate that these deposits occur in some areas as discontinuous lenses and layers. A well log for an on-site production well indicates the thickness of the till to be 71 feet before reaching bedrock (see Appendix F for well logs of the area of the site). Access to this well was not available at the time of the FIT SSI. Area well logs indicate the depth to groundwater to be approximately 24 feet in the sand and gravel layers. Where saturated, these sand and gravel deposits are used as a source of drinking water.

The bedrock in the area of the site consists of sedimentary rock deposited during the Pennsylvanian period. These rock units include members of the Upper Pottsville groups, which have shales, coals, clays, limestones, sandstones, and siltstones (DeLong and White 1963). Well logs for the site area indicate that bedrock wells draw from water-producing sandstones.

The aquifer of concern (AOC) includes both the glacial deposits and the upper parts of the bedrock. Area well logs indicate that private drinking water wells use both the glacial sand and gravel deposits and the bedrock sandstones. Because there is no evidence of a continuous confining layer within a 3-mile radius of the site, the two systems are considered to be hydraulically connected. The depth to the AOC is the same as the depth to groundwater, that is, approximately 24 feet. The

direction of groundwater flow is assumed to be to the northwest, toward Sippo Lake. Sippo Lake is approximately 2 miles northwest of the site. Targets of groundwater contamination include those persons who use private wells within a 3-mile radius of the CDF site. The Canton well fields are located to the southwest of the CDF site and outside of a 3-mile radius of the site. The total population using groundwater is approximately 4,227 persons. This population was calculated by counting houses within a 3-mile radius of the site on United States Geological Survey (USGS) topographic maps of the area of the site (USGS 1961, 1967), and then multiplying this total by the Stark County persons-per-household value of 2.77 (U.S. Bureau of the Census 1982).

5.3 SURFACE WATER

Sippo Lake and Lake Meyers are located within 2 miles of the site. Some water-filled gravel pits are also located within 2 miles of the site. Both lakes Sippo and Meyers are used for recreational purposes. No potential exists, however, for TCL compounds and TAL analytes from the CDF site to migrate to surface water in the area. This lack of potential is based on the fact that the site is relatively flat. Surface water runoff from the site would be diverted before reaching the lakes by intervening streets and railroads.

5.4 AIR

A release of TCL compounds or TAL analytes to the air was not dcoumented during the SSI of the CDF site. During the reconnaissance inspection, FIT site-entry instruments (OVA 128 and colorimetric monitoring tubes for hydrogen cyanide) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does not exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates because the on-site landfills have been capped.

5.5 FIRE AND EXPLOSION

According to federal, state, and local file information reviewed by FIT, and an interview with Bressanelli, no documentation exists of an

incident of fire or explosion at the site (Bressanelli et al. 1990). According to FIT observations and site-entry equipment readings, no potential for fire or explosion existed at the site at the time of the SSI.

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representatives, no incidents of direct contact with TCL compounds or TAL analytes at the CDF site have been documented. The site is completely fenced and there is a 24-hour guard on duty at all times (Bressanelli et al. 1990). There is a potential, however, for the 378 employees that work on-site to come into direct contact with TCL compounds and TAL analytes detected in on-site soil/sediment samples.

6. REFERENCES

Bozerke, Stephen, June 6, 1977, report form, regarding on-site disposal of solid wastes, for Ohio Health Department.

Bressanelli, Jerome P., Larry Stalnaker, Ed England, Fred Zollinger, and Stephen Reilly, May 16, 1990, President, Manufacturing Manager, and Personnel Manager, all from Canton Drop Forge and Manufacturing; and attorneys, Day, Ketterer, Raley, Wright, and Rybolt, Esq., site representative interview, conducted by John Nordine of E & E.

Cavender, Carl, June 21, 1978, President, Canton Drop Forge and Manufacturing, operational report, regarding solid waste disposal at the CDF site, Report No. COF-58515.

DeLong, R., and George White, 1963, Geology of Stark County, Bulletin 61, Ohio Department of Natural Resources, Division of Geological Survey, Columbus, Ohio.

E & E, 1987, Quality Assurance Project Plan Region V FIT Conducted Site Inspections, Chicago, Illinois.

OEPA, October 16, 1981, letter, to Carl Cavender, President, Canton Drop Forge and Manufacturing, from Wayne Nichols, OEPA.

_____, October 15, 1981a, Director's Final Findings and Orders, written by Wayne Nichols, OEPA.

_____, March 11, 1981b, letter, to R. Rebillot, Chief Engineer, Canton Drop Forge and Manufacturing, regarding 1981 Industrial Waste Survey, by Mark Schmidt, Office of Land Pollution Control.

_____, July 28, 1983, letter, from Rodney Beals, Division of Hazardous Materials Management, to Ed England, Canton Drop Forge and Manufacturing.

U.S. Bureau of the Census, 1982, 1980 Census of Population, Characteristics of the Population, General Population Characteristics, Ohio, Washington, D.C.

U.S. EPA, February 12, 1988, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

USGS, 1961, photorevised 1978, Bolivar, Ohio Quadrangle, 7.5 Minute Series: 1:24,000.

_____, 1967, photorevised 1978, Canton West, Ohio Quadrangle, 7.5 Minute Series: 1:24,000.

5983:2

A

APPENDIX A

SITE 4-MILE RADIUS MAP

B

APPENDIX B

MIK

[illegible]

EPA Division No.		Description	Company I.D.	Issue Date	Expiration
1576000073	B001	Boiler #1 Coal	B001	9.23.88	9.22.91
"	B002	Boiler #2 Gas/Oil	B002	11.08.88	11.07.91
"	B003	Boiler #3 Gas/Oil	B003	11.08.88	11.07.91
"	P028	Tumbleblast	BH-0B02	5.20.88	5.20.91
"	P032	Pangborn Unit	BH-0B06	5.20.88	5.20.91
"	P029	Tumbleblast	BH-0B07	5.20.88	5.20.91
"	P036	Super II Tumblast	BH-0B08	12.12.89	12.11.92
"	P045	Super II Tumblast	BH-0B09	11-18-88	11-18-91
"	F001	Plt Roadways + Parking Area	—	2.26.88	2.26.91
"	P037	Box Furnace	BF-FB09	3.30.84	On Registration
"	P038	Box Furnace	BF-FB10	3.30.84	On Registration
"	P039	Box Furnace	BF-FB14	3.30.84	On Registration
"	P001	17' Rotary Furnace	BF-FR01	9.24.76	On Registration
"	P002	17' Rotary Furnace	BF-FR02	9.24.76	On Registration
"	P003	17' Rotary Furnace	BF-FR03	9.24.76	On Registration
"	P004	17' Rotary Furnace	BF-FR04	9.24.76	On Registration
"	P005	17' Rotary Furnace	BF-FR05	9.24.76	On Registration
"	P006	17' Rotary Furnace	BF-FR06	9.24.76	On Registration
"	P007	14' Rotary Furnace	BF-FR07	9.24.76	On Registration
"	P009	17' Rotary Furnace	BF-FR10	9.24.76	On Registration
"	P010	14' Rotary Furnace	BF-FR09	9.24.76	On Registration
"	P015	Box Furnace	BF-FB07	9.24.76	On Registration
"	P016	Box Furnace	BF-FB11	9.24.76	On Registration
"	P017	Box Furnace	BF-FB08	9.24.76	On Registration
"	P019	Box Furnace	BF-FB12	9.24.76	On Registration
"	P020	Box Furnace	BF-FB05	9.24.76	On Registration
"	P021	Box Furnace	BF-FB21	9.24.76	On Registration
"	P022	Annealing Furnace	BH-0F01	9.24.76	On Registration
"	P023	Annealing Furnace	BH-0F02	9.24.76	On Registration
"	P024	Annealing Furnace	BH-0F05	9.24.76	On Registration
"	P025	Car Type Furnace	BH-0F07	9.24.76	On Registration
"	P026	Quench + Draw Furnace	BH-0F06	9.24.76	On Registration
"	P027	Quench + Draw Furnace	BH-0F08	9.24.76	On Registration

MAY 21 '90 1:38 CLF

AIR

EPA Premise Nr		Description	Company ID	Issued	Expires
1576 0000 73	P030	Tatlock	BH-0B03	9-24-76	On Registration
"	P010	Hot Heat Treat Furnace	BH-0F09	2-17-84	On Registration
"	P041	17' Rotary Furnace	BF-FP11	10-04-85	On Registration
"	P043	Hot Hardening Furnace	BH-0F10	4-25-86	On Registration
"	P033	Hookin Grinders	Grinding Area #1	7-02-87	Reclassified On Registration
"	P034	Hand Grinders	Grinding Area #2	7-02-87	Reclassified On Registration
"	P035	Hand Grinders	Grinding Area #3	7-02-87	Reclassified On Registration

C

APPENDIX C

U.S. EPA FORM 2070-13

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE: OH | 02 SITE NUMBER: D004651412

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Gardner Drop Forge	4575 Southway Street SW				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Canton	OH	44706	Stark	151	16

09 COORDINATES: LATITUDE 40 46 45.N | LONGITUDE 081 23 45.W

10 TYPE OF OWNERSHIP (Check one): ■ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
05 16 90 (MONTH DAY YEAR)	■ ACTIVE ☐ INACTIVE	1945 (BEGINNING YEAR) / present (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply):
☐ A. EPA ■ B. EPA CONTRACTOR Ecology + Environment Inc. (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ☐ E. STATE ☐ F. STATE CONTRACTOR ☐ G. OTHER (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Tom Hoskins	Ecologist	E+E, Inc.	(312) 663-9415
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Henry Adamiak	Civil Engineer	"	( ) "
Joe Corns	Civil Engineer	"	( ) "
Sherrie Stevens	Health + Safety Specialist	"	( ) "
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Jerome P. Bressanilli	President	4575 Southway St SW	(216) 477-4571
Larry L. Stalnaker	Manager	" " "	( ) "
Ed England	Manager	" " "	( ) "
Stephen J. Reilly	attorney	50 West Broad St	(614) 228-3611
Fred H. Zollinger, Jr.	Attorney	121 Cleveland Ave. S.	(216) 455-5073
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	530	cloudy, light rain, 50°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Rod Beals	OEPA NE District	(216) 425-9171

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
John Hoskins	U.S. EPA	E+E, Inc	312-663-9415	10 8 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

CDF004642

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OH	D0046514 2

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [x] A. SOLID
- [ ] B. POWDER, FINES
- [x] C. SLUDGE
- [ ] D. OTHER (Specify)
- [ ] E. SLURRY
- [x] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: unknown
CUBIC YARDS:
NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- [x] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [x] D. PERSISTENT
- [x] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	unknown		
OLW	OILY WASTE	unknown		
SOL	SOLVENTS	unknown		See Section 4 of Narrative
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	unknown		
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	See Section 4 of Narrative				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Steel	NA	FDS		
FDS	carbon alloy	NA	FDS		
FDS	nickel alloy	NA	FDS		
FDS	Titanium	NA	FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E & E FIT files Federal and State files
Site Inspection 5/16/90

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OH | 02 SITE NUMBER: D004654142

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION | 02 ☐ OBSERVED (DATE _____) | ☒ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,227 | 04 NARRATIVE DESCRIPTION

See narrative section 5.2 for information.

01 ☐ B. SURFACE WATER CONTAMINATION | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 | 04 NARRATIVE DESCRIPTION

See narrative section 5.3 for information.

01 ☐ C. CONTAMINATION OF AIR | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 | 04 NARRATIVE DESCRIPTION

See narrative section 5.4 for information

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 | 04 NARRATIVE DESCRIPTION

See narrative section 5.5 for information.

01 ☒ E. DIRECT CONTACT | 02 ☐ OBSERVED (DATE _____) | ☒ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 378 | 04 NARRATIVE DESCRIPTION

See narrative section 5.6 for information

01 ☐ F. CONTAMINATION OF SOIL | 02 ☒ OBSERVED (DATE 5/16/90) | ☐ POTENTIAL | ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 25 (Acres) | 04 NARRATIVE DESCRIPTION

See narrative sections 4 and 5 for information

01 ☒ G. DRINKING WATER CONTAMINATION | 02 ☐ OBSERVED (DATE _____) | ☒ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4,227 | 04 NARRATIVE DESCRIPTION

See narrative section 5.2 for information.

01 ☒ H. WORKER EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE _____) | ☒ POTENTIAL | ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 378 | 04 NARRATIVE DESCRIPTION

There is a potential that workers may come in contact with the TCL compounds and TAL analytes found in on-site soils

01 ☐ I. POPULATION EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4227 | 04 NARRATIVE DESCRIPTION

See narrative section 5 for information

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OH	D004651142

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The landfilled area had a new clay cover applied no flora had been established at the time of the inspection 5/16/90

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
The site is fenced, No damage to fauna has been reported and none was observed by FIT.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The site is in the city and is fenced.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: 6/30/83, 6/15/90) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 4277 — 04 NARRATIVE DESCRIPTION OEPA observed leaking oil drums during a site inspection. Onsite soil sediment samples detected TAL analytes and TCL compounds.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None observed by FIT.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
N/A

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION
None observed by FIT. June 30, 1983 a complaint was filed with the OEP about buried drums and sludge disposal on-site.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 4277

IV. COMMENTS
None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
FIT files, Federal and State files
Site inspection 5/16/90

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	000465142

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☑ C. AIR	see appendix B			
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☑ G. STATE (Specify)	unknown			permit for landfill
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☒ A. SURFACE IMPOUNDMENT	unknown	
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND	5,000	55 gallon
☒ D. TANK, ABOVE GROUND	8,000	gallons
☒ E. TANK, BELOW GROUND	150,000	gallons
☒ F. LANDFILL	unknown	
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☒ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE

5 buildings

06 AREA OF SITE

25 (Acres)

07 COMMENTS

See narrative sections 2 and 3 for information

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

See narrative section 2 and 3 for information

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

See narrative sections 2, 3, and 5 for information

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

E & E FIT, Federal and State files, site inspection 5/16/90

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D004651142

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ■
NON-COMMUNITY	C. ☐	D. ■

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ■
D. ☐	E. ☐	F. ☐ unknown

03 DISTANCE TO SITE

A. _____ (mi)
B. on site (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 4,277

03 DISTANCE TO NEAREST DRINKING WATER WELL on site (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
74 (ft)	northwest	24 (ft)	3,456,000 (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

See narrative section 5.2

10 RECHARGE AREA

■ YES ☐ NO

COMMENTS: The 3 lagoons on site are used for infiltration

11 DISCHARGE AREA

■ YES ☐ NO

COMMENTS: discharge to near by gravel pits.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

■ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ■ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
NA Lake Lipser	☐	1/4 (mi)
Lake Meyers	☐	2 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 1,863 NO. OF PERSONS	B. ≈24,000 NO. OF PERSONS	C. ≈36,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

1/4 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

≈9,000

04 DISTANCE TO NEAREST OFF-SITE BUILDING

200 feet (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The population within the vicinity of the site is residential with some industrial areas.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D004365142

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
71 (ft)	unknown (ft)	unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
4 (in)	2.3 (in)	0 %	NA	0 %

09 FLOOD POTENTIAL

SITE IS IN NA YEAR FLOODPLAIN

10 NA ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. N/A (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

NA (mi)

ENDANGERED SPECIES: None

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 200¼ feet (mi)	B. ¼ (mi)	C. NA (mi)	D. NA (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See 4-mile radius map in Appendix A

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E+E FIT files, Federal and State files

EPA FORM 2070-13 (7-81)

CDF004648

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D 005446514 2

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			available
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL		see section 3.4	
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA ; 28	No Readings above background
Radiation MiniAlert	No readings above background
Explosion Meter	0% LEL
Oxygen Meter	21% O2
Drager pump (HCN)	No readings above background

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL	02 IN CUSTODY OF Ecology & Environment, Inc. Chicago, IL. (Name of organization or individual)
03 MAPS ☒ YES ☐ NO	04 LOCATION OF MAPS Ecology & Environment, Inc. Chicago, IL.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E & E, Inc. FIT site inspection 5/16/90

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION
01 STATE: OH | 02 SITE NUMBER: D004465142

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Cordier Group		unknown		Hudson	OH	
NA						
NA						
NA						

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
NA						
NA						
NA						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Canton Drop Forge		4575 Southway St. SW		Canton	OH	44706
U.S. Army Air Corp		unknown				
NA						

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
NA						
NA						
NA						

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E+E FIT files Federal and State files
site inspection 5/16/90

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D004465142

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
NA	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Canton Drop Forge		NA	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
4575 Southway St. SW,			

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Canton	OH	44706			

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
36	

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
NA		NA	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
NA		NA	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E+E, FIT, Federal, and State files
site inspection 5/16/90

EPA FORM 2070-13 (7-81)

CDF004651

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION
01 STATE: OH | 02 SITE NUMBER: OOO4465142

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Canton Drop Forge	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
4575 Southway St SW	
05 CITY	06 STATE / 07 ZIP CODE
Canton	OH / 44706

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
NA		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
NA		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
Browning Ferris Industries		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
1447 Morton Road		
05 CITY	06 STATE	07 ZIP CODE
Akron	OH	44319

01 NAME	02 D+B NUMBER	04 SIC CODE
Advance Drain & Sewer		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
3113 Lincoln Way West		
05 CITY	06 STATE	07 ZIP CODE
Wooster	OH	

01 NAME	02 D+B NUMBER	04 SIC CODE
Research Oil Reclamation		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
2655 Transport Road		
05 CITY	06 STATE	07 ZIP CODE
Cleveland	OH	43216

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E&E FIT, Federal and State files
site inspection 5/16/90

EPA FORM 2070-13 (7-81)

CDF004652

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	000446542

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION NA	02 DATE	03 AGENCY

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OH	D004465142

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E & E FIT, Federal and State files
site inspection 5/16/90

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OH	000446542

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

NA

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E+E FIT, Federal and State files
site inspection 5/16/90

EPA FORM 2070-13 (7-81)

D

APPENDIX D

FIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge + MFG. Company PAGE 1 OF 18

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: F0H0625SA

DATE: 5-16-90

TIME: 0945

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: 50's cloudy, some rain

PHOTOGRAPHED BY: John Nodine

SAMPLE ID (IF applicable): N/A

DESCRIPTION: Inside Main Forge building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge & MFG. Co. PAGE 2 OF 19

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: FCHG25SA

DATE: 5/16/90

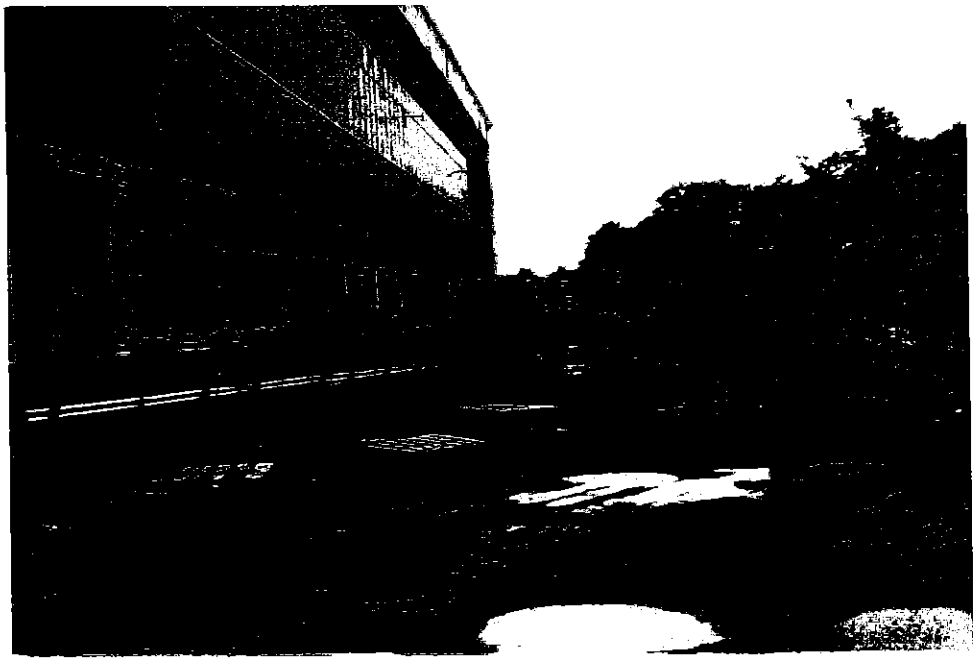
TIME: 1235

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): CF



DESCRIPTION: North side of C.D.F. plant.

DATE: 5/16/90

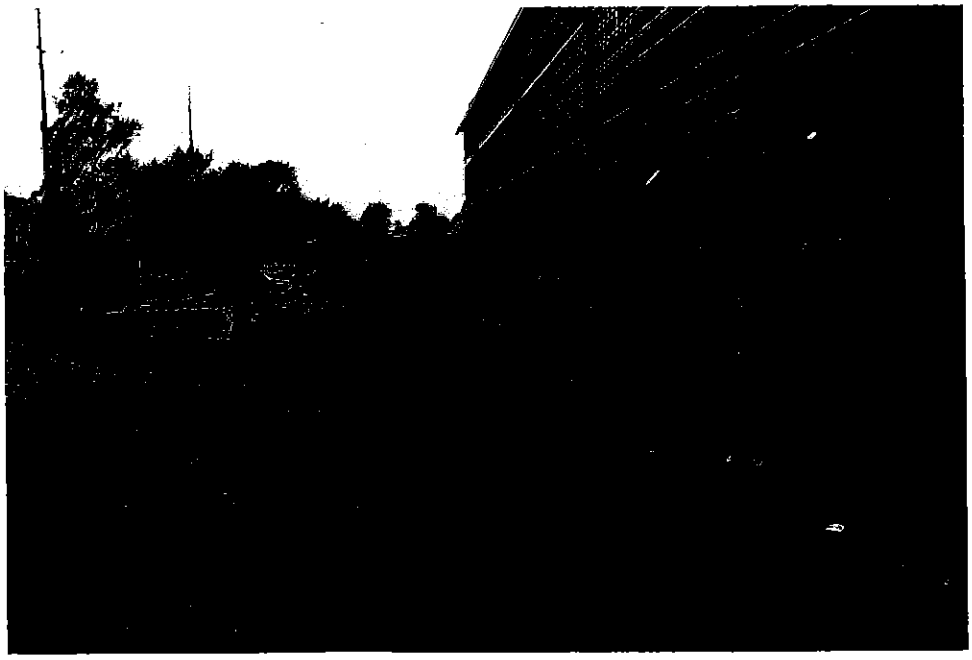
TIME: 1240

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): CF



DESCRIPTION: Same as above, Tote boxes on left side of picture.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge + MFG. Co. PAGE 3 OF 15

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: F05-0255A

DATE: 5/16/90

TIME: 1550

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): NA

DESCRIPTION: Gate by guard house (east side).

DATE: 5/16/90

TIME: 340

DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): NA

DESCRIPTION: Lagoon #3

CDF004660

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Carlon Disop Forge & Mfg. Company PAGE 1 OF 13

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: F0H0625SA

DATE: 5-16-90 TIME: 1500 DIRECTION OF PHOTOGRAPH: West PHOTOGRAPHED BY: John Mordine

WEATHER CONDITIONS: 60's Cloudy, warm, clear SAMPLE ID (if applicable): N/A

DESCRIPTION: Lagoon #2 with plant in background

CDF004661

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge / MFS. Co. PAGE 5 OF 18

U.S. EPA ID: OHD004465412 TDD: FC5-9004-001 PAN: FOH0625SA

DATE: 2/16/90

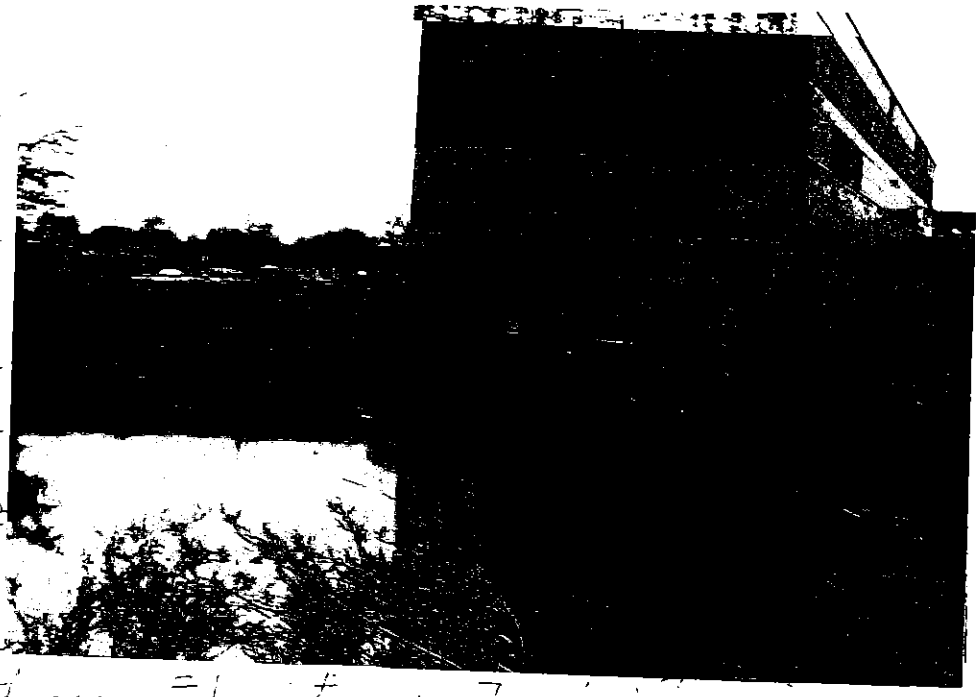
TIME: 1 40

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): N/A



DESCRIPTION: Lagoon #1 with units building in background

DATE: 2/16/90

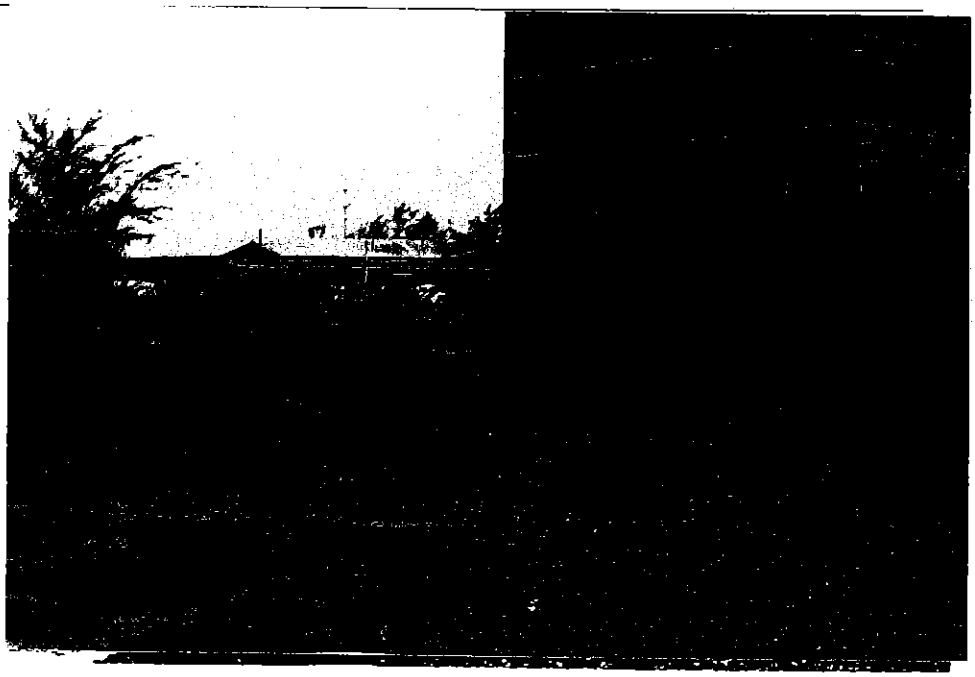
TIME: 1 40

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): N/A



DESCRIPTION: Waste oil tank in lagoon #1

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge & MFG. Co. PAGE _ OF 15

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: FOH0625SA

DATE: 5/6/90

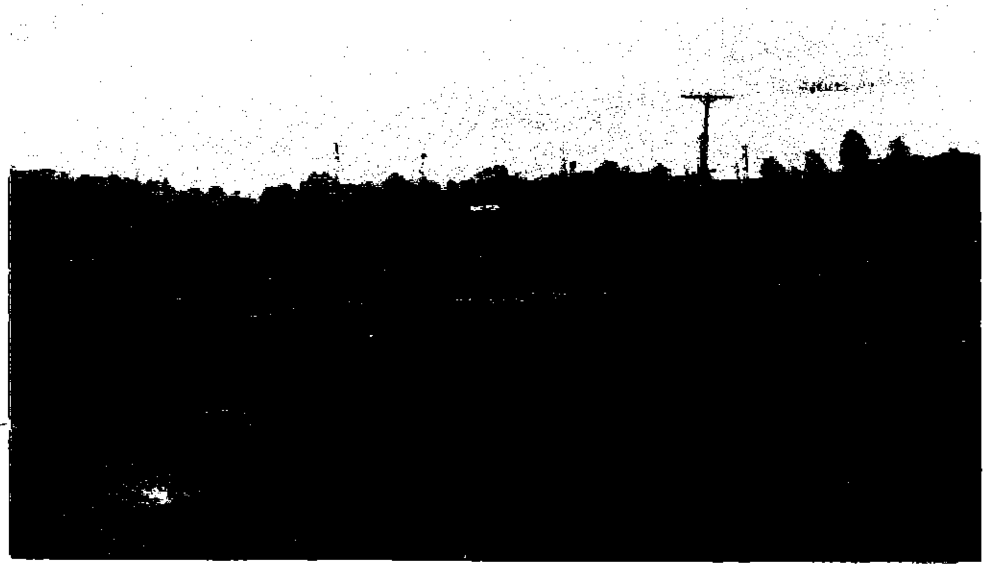
TIME: 1550

DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): NA



DESCRIPTION: [illegible] filled area west of [illegible] facility. [illegible] fresh cover material.

DATE: 5/6/90

TIME: 1550

DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): NA

DESCRIPTION: Same as above.

CDF004663

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge & MFG. Co. PAGE 7 OF 18

U.S. EPA ID: OHD004641412 TDD: F05-9004-001 PAN: FOHG25SA

DATE: 5/16/90

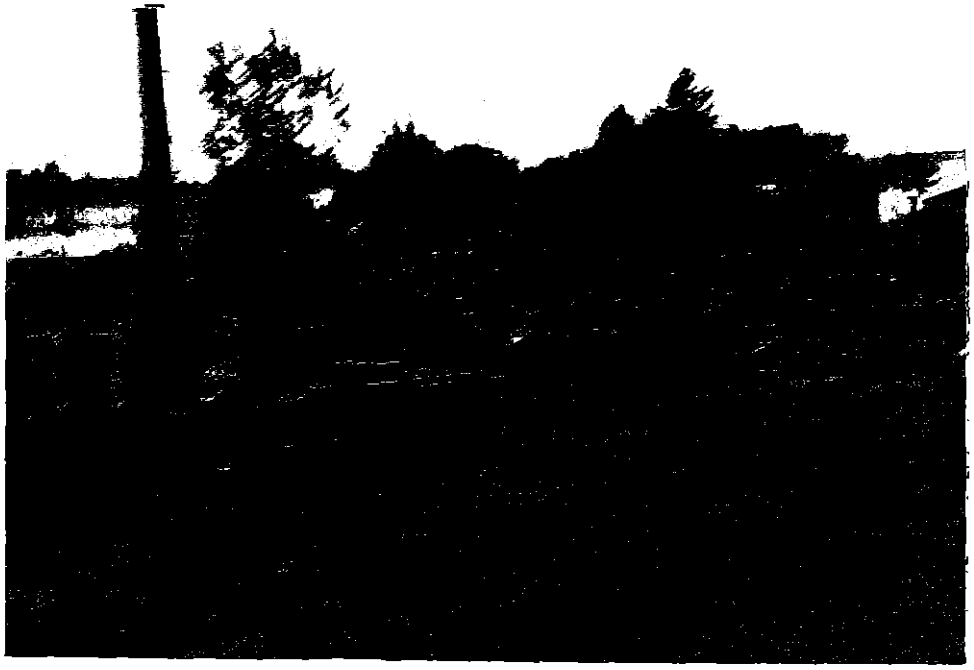
TIME: 1515

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): 1.F



DESCRIPTION: Drop Forge Storage area.

DATE: 5/16/90

TIME: 1515

DIRECTION OF PHOTOGRAPH: Southeast

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable):

DESCRIPTION: Drop Forge Storage

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Air Force / N.F.S. Co. PAGE 5 OF 12

U.S. EPA ID: CHD004465 4 TDD: F05-9004-001 PAN: For 4253A

DATE: 5/16/90

TIME: 1515

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): NA

DESCRIPTION: Drum in sub-surface area.

DATE: 5/16/90

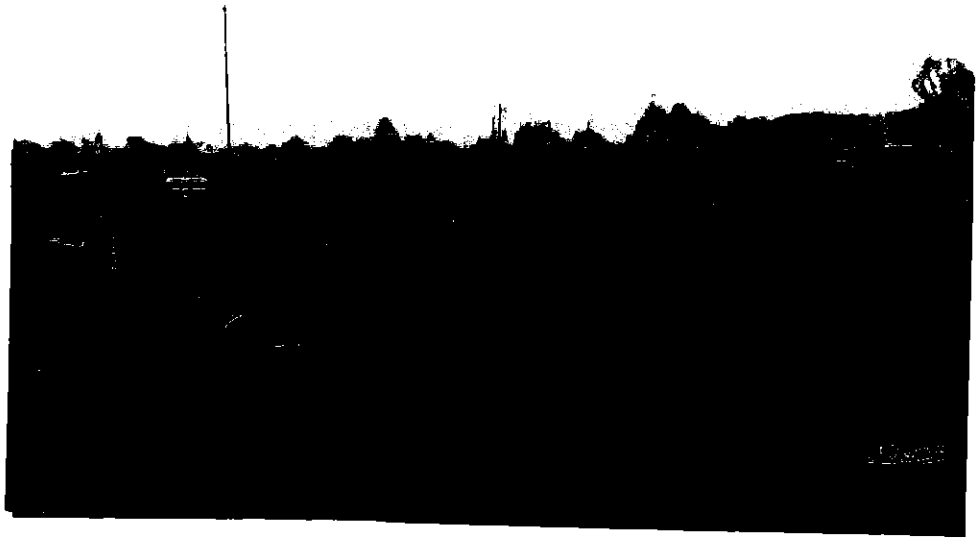
TIME: 1515

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): NA

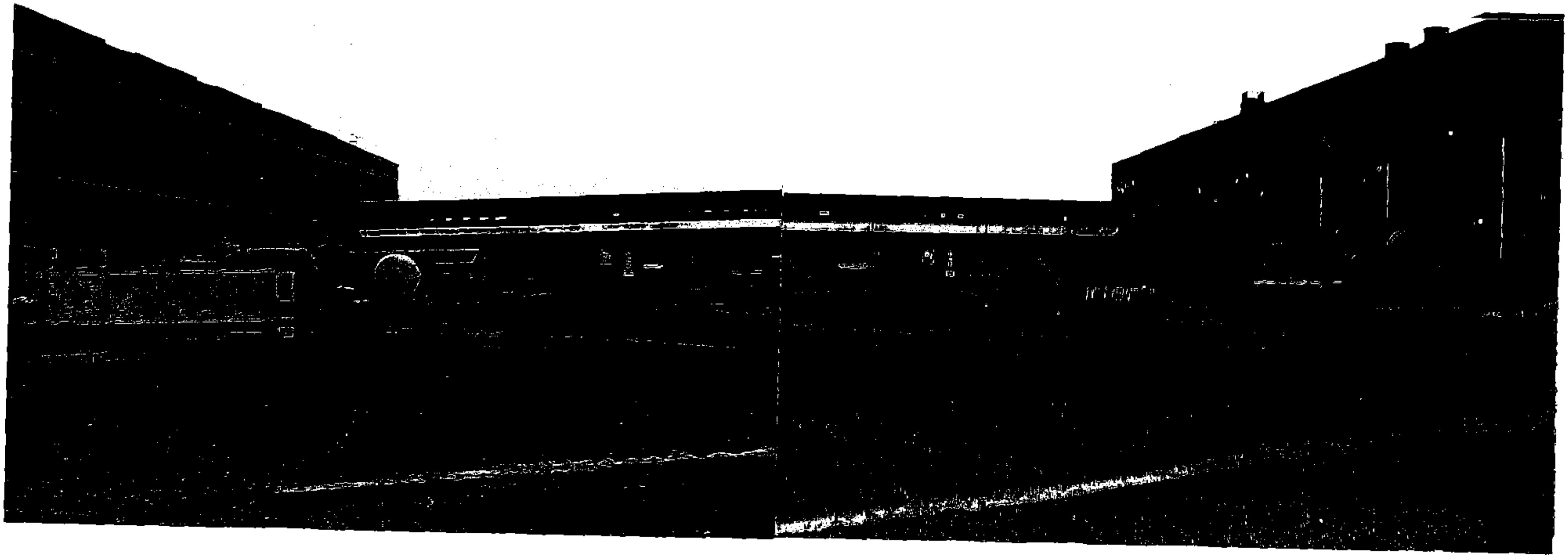


DESCRIPTION: Same as above

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge + MFG. Company PAGE 9 OF 18

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: F0110(2SSA



DATE: > 5/16/90 TIME: > 1140 DIRECTION OF PHOTOGRAPH: > North PHOTOGRAPHED BY: > John Nordine

WEATHER CONDITIONS: > 50's cloudy, some rain SAMPLE ID (if applicable): > NA

DESCRIPTION: > Area between upsetter and main forge area. In this area, the underground storage tank and drum storage area are located.

CDF004666

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge & MFG. Co. PAGE 10 OF 18

U.S. EPA ID: OHD044605412 TDD: F05-9004-001 PAN: FOHO25SA

DATE: 7/16/90

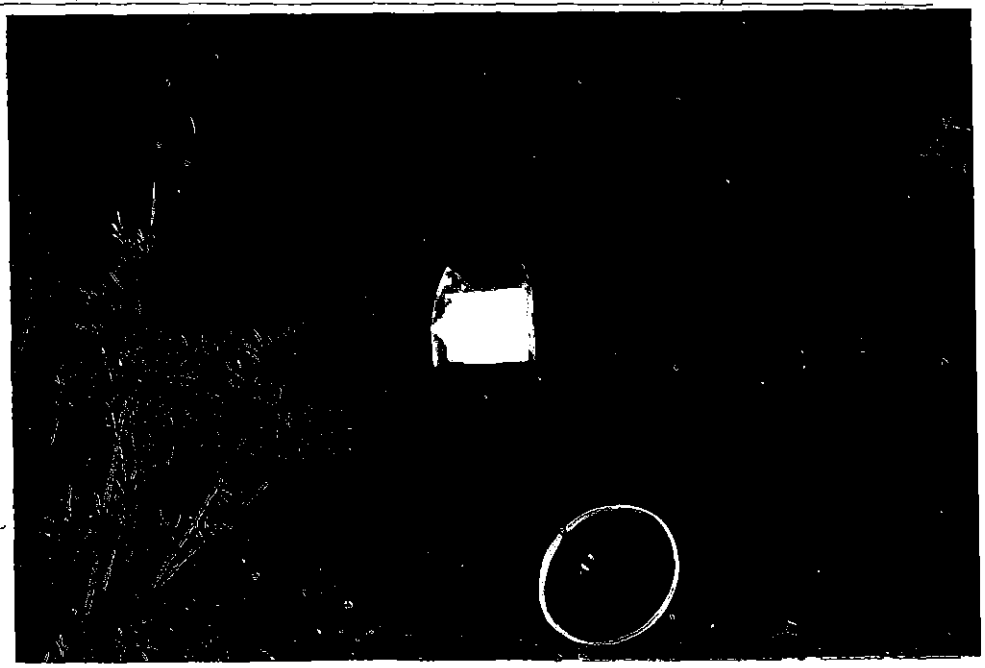
TIME: 11:30

DIRECTION OF PHOTOGRAPH: Northwest

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S1



DESCRIPTION: Sediment sample S1 from inlet #1.

DATE: 7/16/90

TIME: 1130

DIRECTION OF PHOTOGRAPH: Northwest

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-1

DESCRIPTION: Same as above

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge + MFG. Co.   PAGE 11 OF 18

U.S. EPA ID: OHD004465412 TDD: F05-9004-001   PAN: FOH0625SA

DATE: 5/16/90

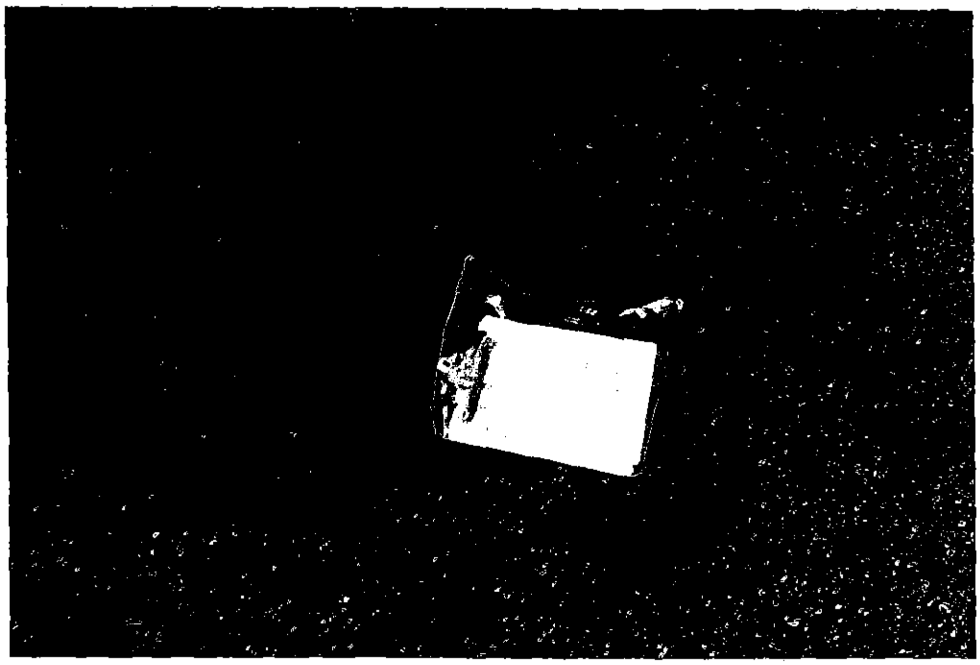
TIME: 1145

DIRECTION OF PHOTOGRAPH: Northwest

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-2



DESCRIPTION: Soil sample S-2 from waste pile near lagoon #1.

DATE: 5/16/90

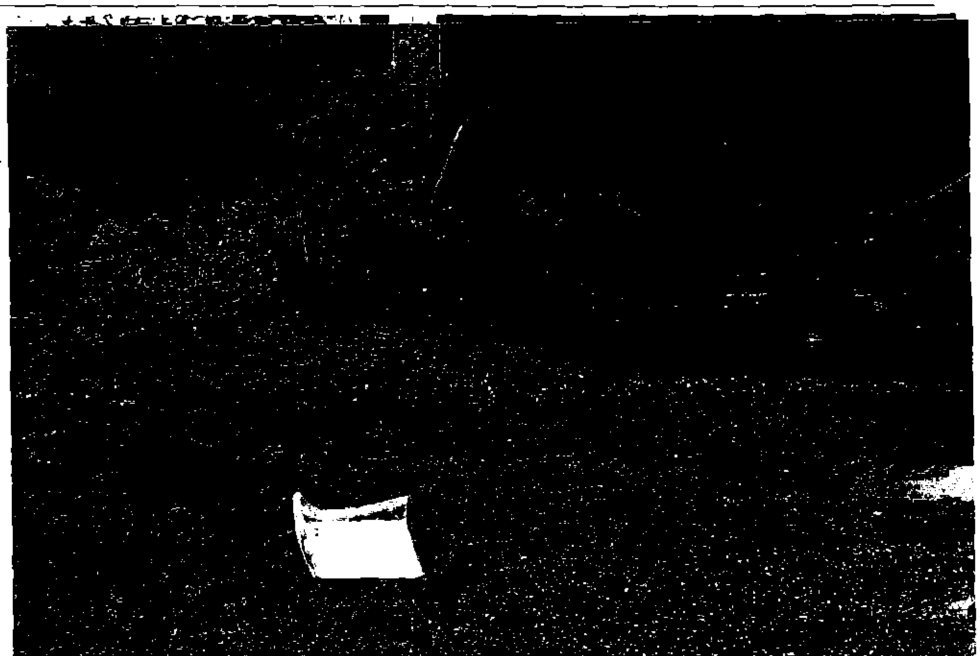
TIME: 1145

DIRECTION OF PHOTOGRAPH: Northwest

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-2



DESCRIPTION: Same as above.

CDF004668

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge / MFG. Co. PAGE 12 OF 18

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: FOH0625SA

DATE: 7/16/90

TIME: 1235

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-3

DESCRIPTION: Soil sample S-3 collected near dirt mound in northwest corner of the site property.

DATE: 7/16/90

TIME: 1235

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-3

DESCRIPTION: Same as above

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge & MFG. Co. PAGE 13 OF 18

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: FOH0625SA

DATE: 5/16/90

TIME: 330

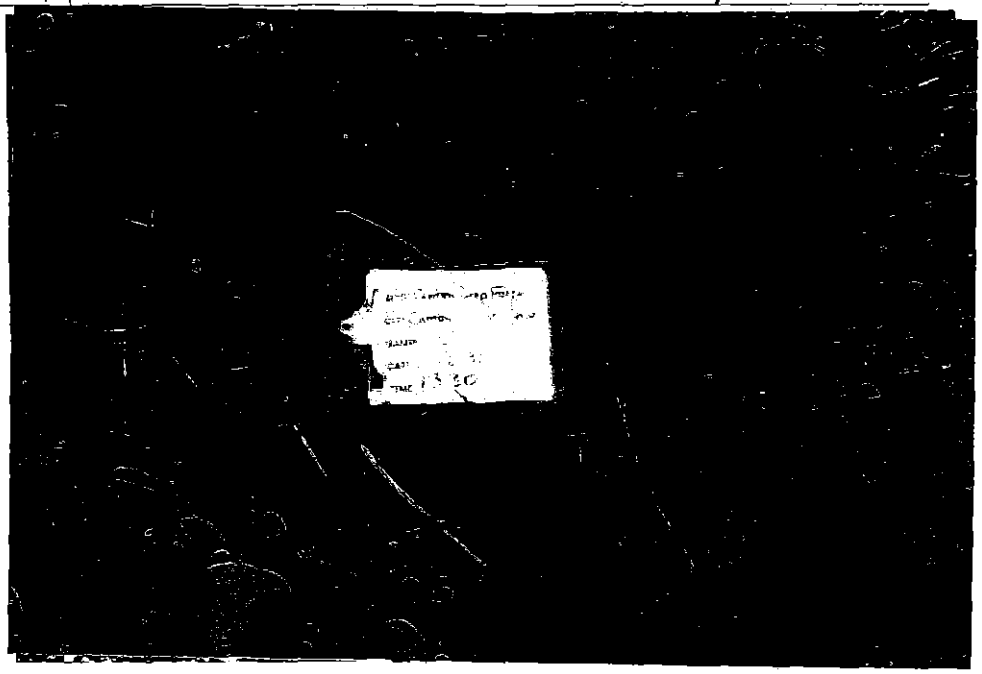
DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: 50's cloudy

some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-4



DESCRIPTION: Soil sample S-4 west end of Lagoon #3.

DATE: 5/16/90

TIME: 330

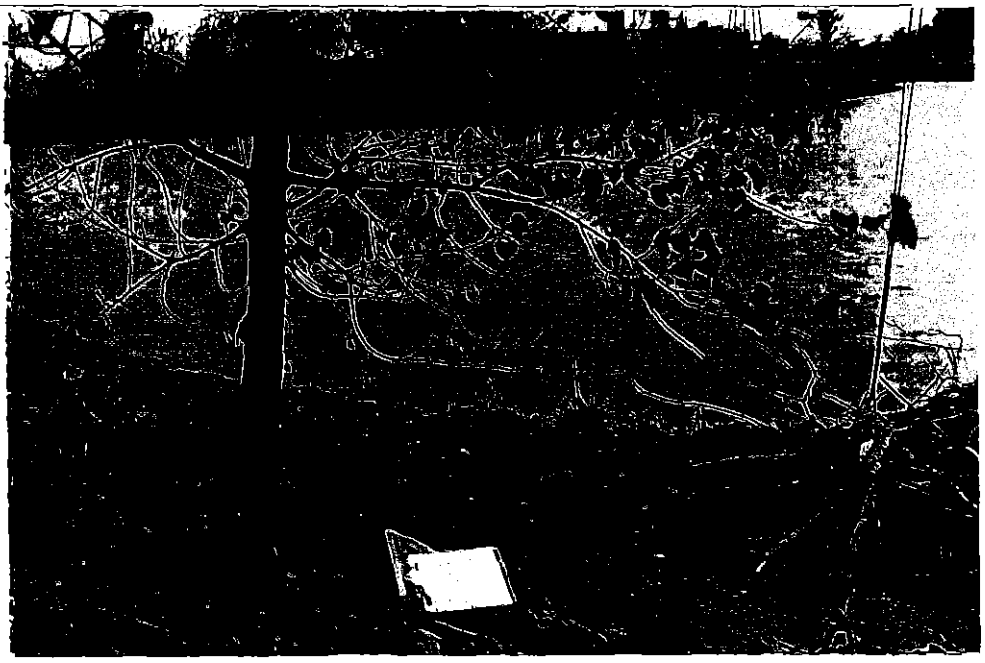
DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: 50's - cloudy

some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-4



DESCRIPTION: Same as above.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge + MFG. Co. PAGE 4 OF 18

U.S. EPA ID: C-DC-1465412 TDD: F05-9604-0[illegible] PAN: FOH0625SA

DATE: 5/1[illegible]

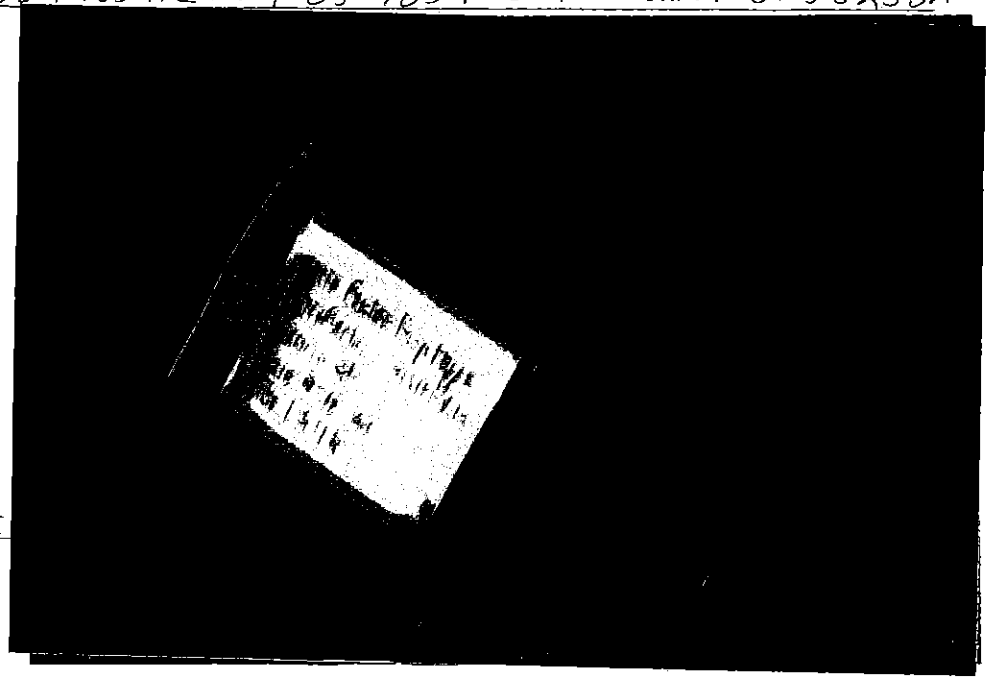
TIME: 335

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-5



DESCRIPTION: Sediment sample S-5 collected near the inlet in lagoon #3 from lagoon #2.

DATE: 5-1[illegible]

TIME: 1335

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: 50's cloudy, some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-5

DESCRIPTION:

Same as above.

SIO11(1/25/89

CDF004671

FIELD PHOTOGRAPHT LOG SEEET

SITE NAME: Canton Drop Forge & MFG. Co. PAGE 15 OF 18

U.S. EPA ID: OHDOC4465412 TDD: F05-9004-001 PAN: FOH0625SA

DATE: 5/16/90

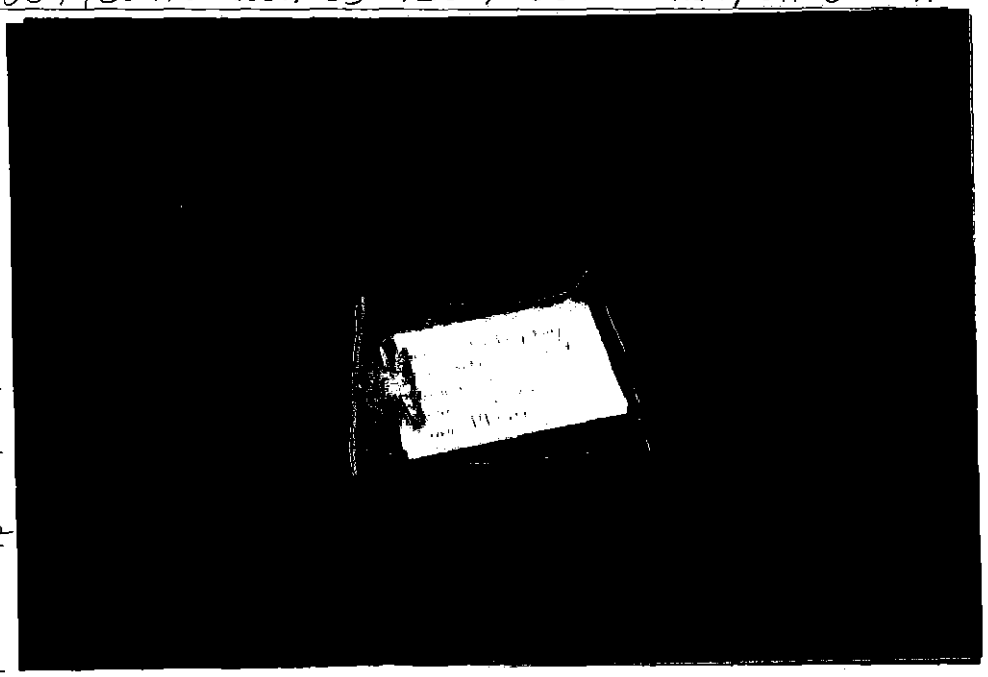
TIME: 1400

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-5



DESCRIPTION: Soil sample S-5 collected from zone A brownish cover material. Silt sheen on water.

DATE: 5/16/90

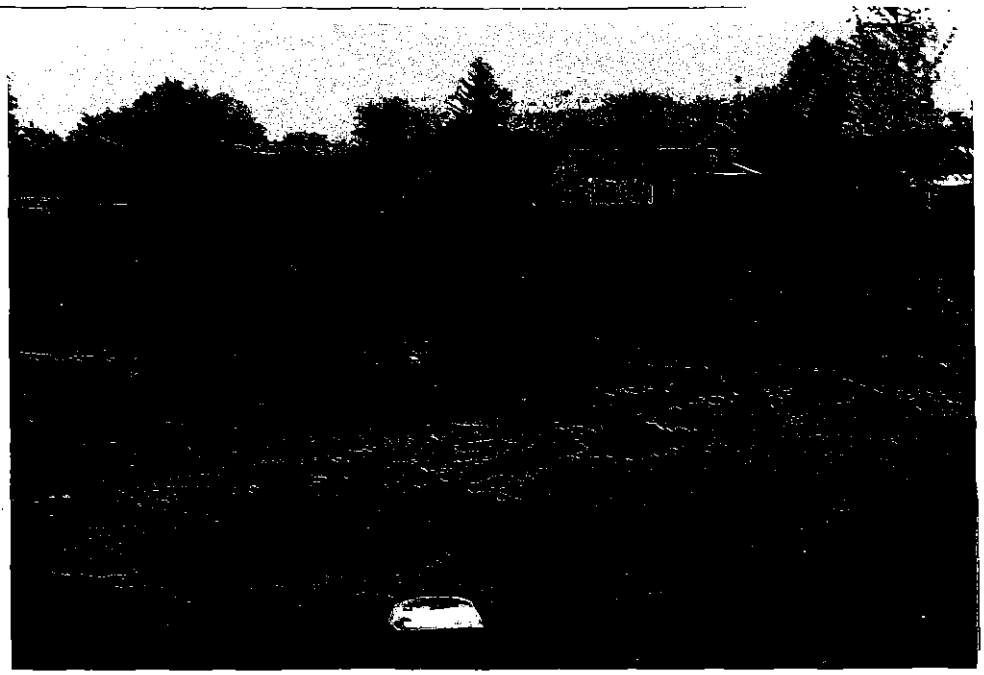
TIME: 1400

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-6



DESCRIPTION: Same as above, note fresh cover

FIELD PHOTOGRAPH LOG SHEET

SITE NAME: Canton Drop Forge & MFG Co. PAGE 16 OF 19

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: FOH0625SA

DATE: 5/16/90

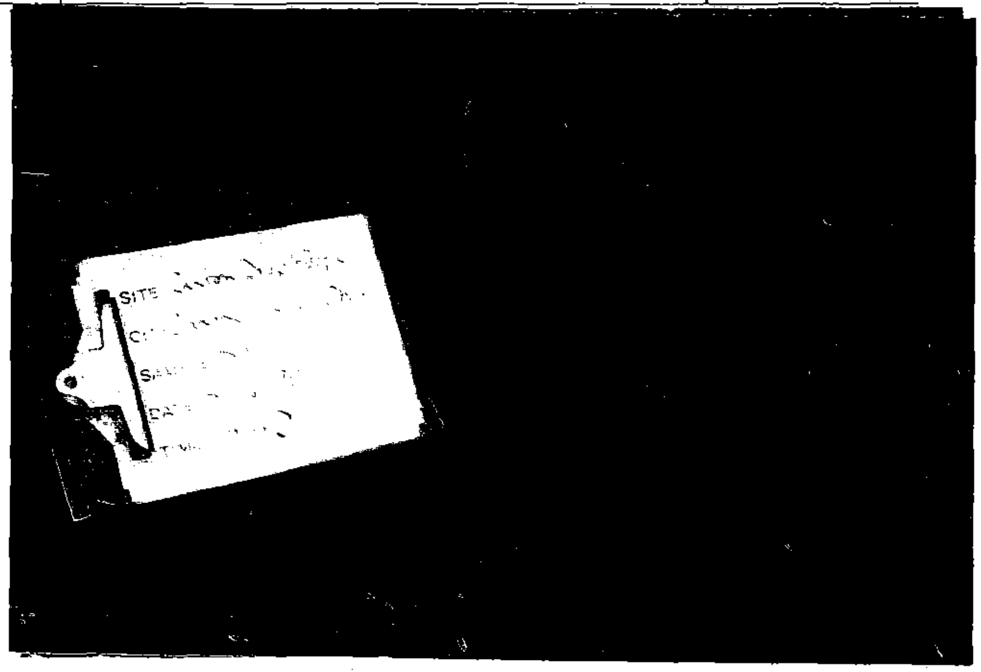
TIME: 1440

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-7



DESCRIPTION: Soil sample S-7 collected near the pump shack on lagoon #2 Note the substance on the bank.

DATE: 5/16/90

TIME: 1440

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-7

DESCRIPTION: Same as above.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Canton Drop Forge + MPG Co. PAGE 17 OF 18

U.S. EPA ID: OHD004465412 TDD: F05-9004-001 PAN: F0H0625SA

DATE: 5/16/90

TIME: 450

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-8

DESCRIPTION: Soil sample S-8 collected from swamp area.

DATE: 5/16/90

TIME: 450

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-9

DESCRIPTION: Same as above.

CDF004674

FIELD PHOTOGRAPHT LOG SEET

SITE NAME: Canton Drop Forge & MFG. Co. PAGE 18 OF 18

U.S. EPA ID: OHDOC4465412 TDD: F05-9004-001 PAN: FOH06255A

DATE: 5/16/90

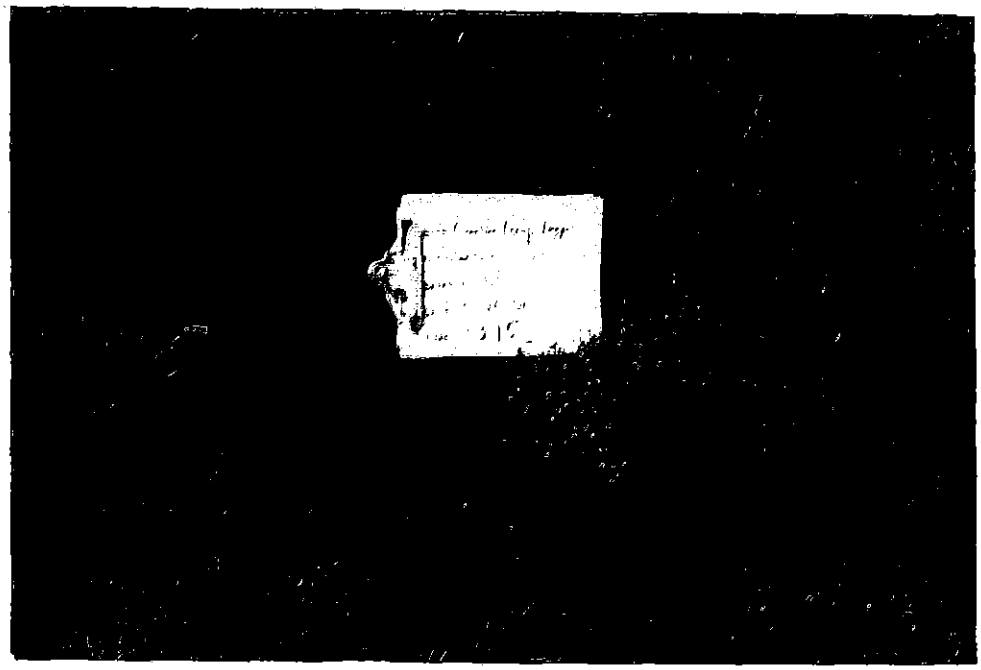
TIME: 1315

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-9



DESCRIPTION: In sample S-9 collected near the shed building.

DATE: 5/16/90

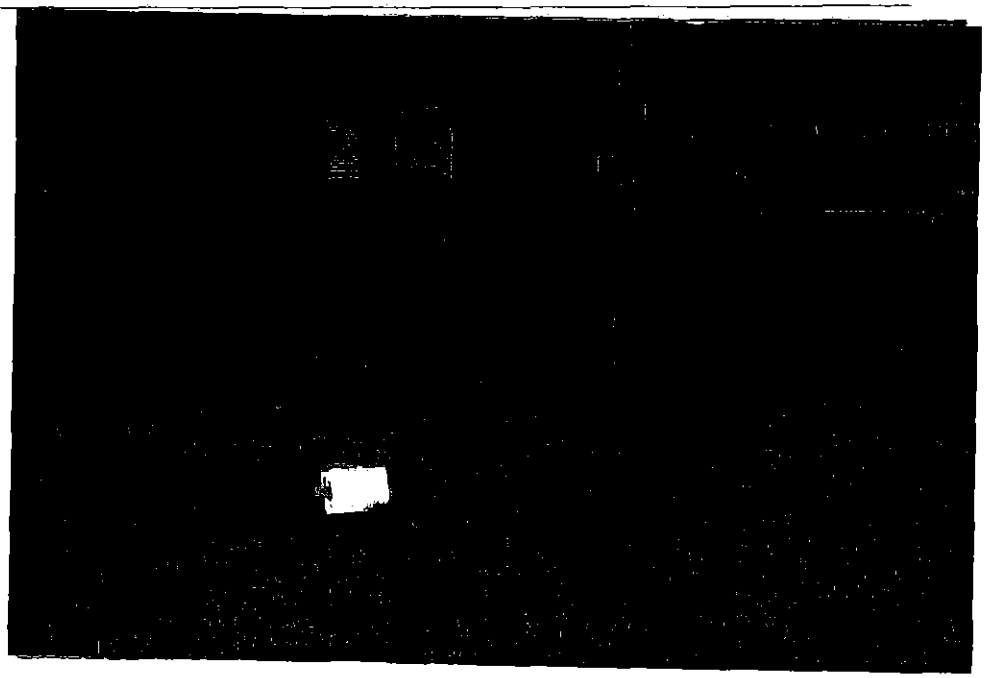
TIME: 1315

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: 50's cloudy some rain

PHOTOGRAPHED BY: John Nordine

SAMPLE ID (if applicable): S-19



DESCRIPTION: Same as above.

E

APPENDIX E

U.S. EPA TARGET COMPOUND LIST AND
TARGET ANALYTE LIST
QUANTITATION/DETECTION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

TABLE A (Cont.)
CONTRACT LABORATORY PROGRAM
HAZARDOUS SUBSTANCE LIST (HSL)
INORGANIC DETECTION LIMITS

COMPOUND	PROCEDURE	DETECTION LIMITS	
		WATER	SOIL SEDIMENT SLUDGE
ALUMINUM	ICP	200 ug/L	40 mg/KG
ANTIMONY	FURNACE	60	2.4
ARSENIC	FURNACE	10	2
BARIUM	ICP	200	40
BERYLLIUM	ICP	5	1
CADMIUM	ICP	5	1
CALCIUM	ICP	5000	1000
CHROMIUM	ICP	10	2
COBALT	ICP	50	10
COPPER	ICP	25	5
IRON	ICP	100	20
LEAD	FURNACE	5	1
MAGNESIUM	ICP	5000	1000
MANGANESE	ICP	15	3
MERCURY	COLD VAPOR	0.2	0.008
NICKEL	ICP	40	8
POTASSIUM	ICP	5000	1000
SELENIUM	FURNACE	5	1
SILVER	ICP	10	2
SODIUM	ICP	5000	1000
THALLIUM	FURNACE	10	2
TIN	ICP	40	8
VANADIUM	ICP	50	10
ZINC	ICP	20	4
CYANIDE	COLOR	10	2

F

APPENDIX F

WELL LOGS OF THE AREA OF THE SITE

WATER WELLS
&
PUMPS

WELL SCREENS
&
TEST HOLES

M. J. ENGEL DRILLING CO.

well log 1

MASSILLON, OHIO R. D. 2

PHONE MASSILLON [illegible]

DRILLED FOR The Canton Drop Forge and Manufacturing Co.

ADDRESS Canton, Ohio

DATE April 8, 1942

LOCATION 150 feet North of House & brick Canton-Massillon Rd.

250 feet from Pennsylvania Railroad.

Well #1

Thickness	Strata	Total	Water Level
30 feet	gravel, sand, and clay	30 feet	
50 feet	sand and clay	80 feet	
10 feet	sand, clay and gravel	90 feet	
15 feet	gravel	105 feet	
19 feet	sand	124 feet	
15 feet	clay and sand	139 feet	
7 feet	sand rock	146 feet	71 feet

Set 30 feet of 10" perforated pipe for screen.

CDF004685

WATER WELLS and PUMPS

WELL SCREENS and TEST HOLES

M. J. ENGEL DRILLING CO.

well log 2

MASSILLON, OHIO, R. D. 2

PHONE: MASSILLON 2-1620

DRILLED FOR The Canton Drop Forge and Manufacturing Co.

ADDRESS Canton, Ohio

DATE June 7, 1943

LOCATION

Well #1

Thickness	Strata	Total	Water Level
	Moved back, pulled screen, and drove 12" pipe to rock. Depth at start - 146 feet.		
2 feet	sand rock	148 feet	
4 feet	clay and sand	152 feet	
8 feet	shale and sand rock	160 feet	
20 feet	sand rock and shale	180 feet	
42 feet	soft black shale	222 feet	
2 feet	sand rock	224 feet	
10 feet	soft black shale	234 feet	
3 feet	sand rock	237 feet	
21 feet	soft black shale	265 feet	
17 feet	sand rock and shale	282 feet	
8 feet	sand rock	290 feet	
2 feet	shale	292 feet	
133 feet	sand rock	425 feet	75 feet
	160 feet 12" drive pipe Well was shot with 60 quarts of Nitro. Measurements- ground level		

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

well log 3

No 95245

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

County Stark Township Canton Section of Township or Lot Number 6

Owner Frank Pirtey Address 1658 Whipple Rd [illegible]

Location of property 850 Lakewood ave N.W.

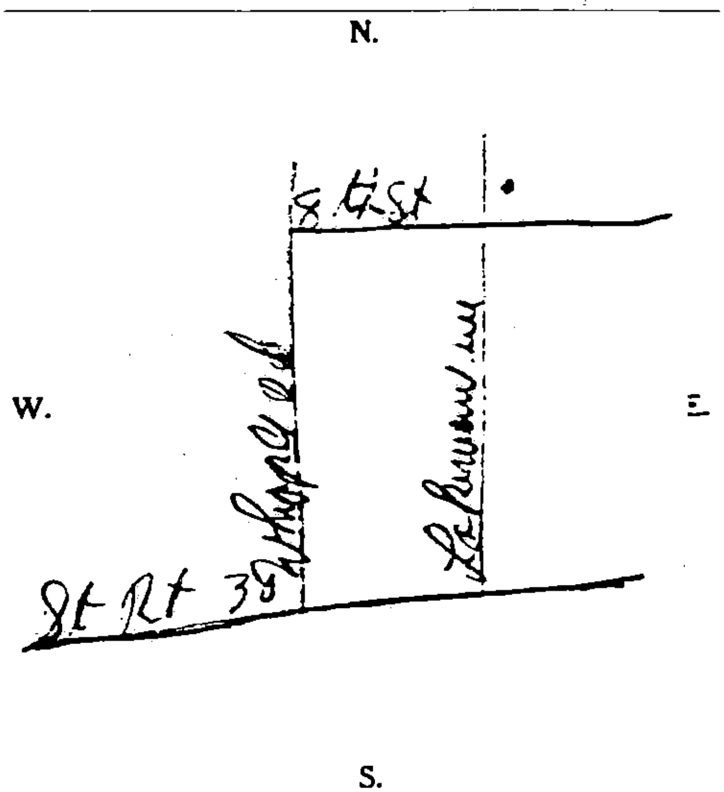
CONSTRUCTION DETAILS		PUMPING TEST	
Casing diameter 4"	Length of casing 94'	Pumping rate .... G.P.M.	Duration of test .... hrs.
Type of screen	Length of screen	Drawdown .... ft.	Date
Type of pump		Developed capacity	
Capacity of pump		Static level—depth to water 70' ft.	
Depth of pump setting		Pump installed by	

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Sand + Gravel	0 Feet	40 Ft.
Brown sand	40'	60'
Sand + Gravel	60'	85'
Blue Muck	85'	94'
Blue Clay	94'	104'
White sandstone	104'	[illegible]

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm Holland & [illegible] Date July 15, 1953

Address 4916, 2nd St N.W. Signed John L Holland

3

CDF004687

WELL LOG AND DRILLING REPORT

ORIGINAL

well log 4
474500

NO CARBON PAPER NECESSARY – SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Geological Survey
Fountain Square
Columbus, Ohio 43224 Phone (614) 466-5344

COUNTY STARK TOWNSHIP CANTON SECTION OF TOWNSHIP OR LOT NUMBER 20

OWNER KENNETH WALTER ADDRESS 4238 DUEZER AVE

LOCATION OF PROPERTY 3/4 MI NORTH OF FAIRCREST ON DUEZER AVE

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 126'
Type of screen — Length of screen —
Type of pump —
Capacity of pump —
Depth of pump setting —
Date of completion —

BAILING OR PUMPING TEST
(Specify one by circling)

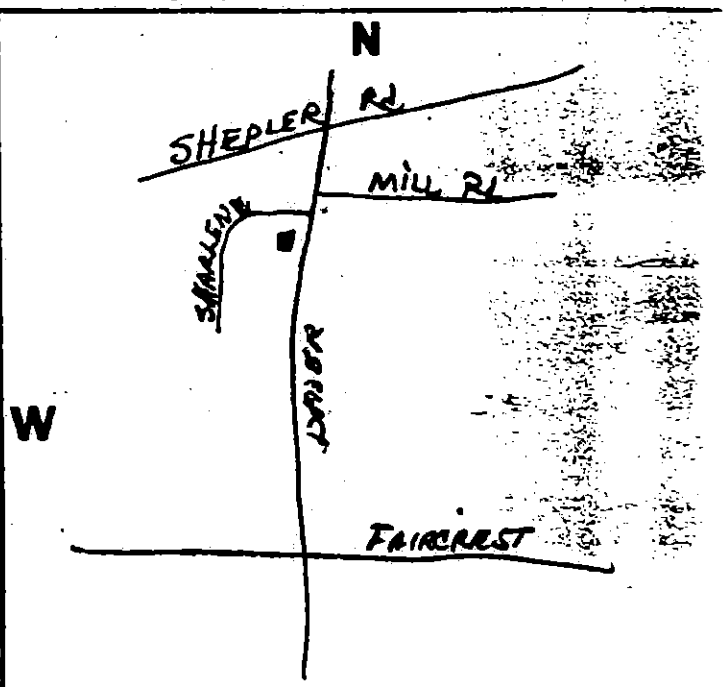
Test rate 15 gpm Duration of test 1 1/4
Drawdown 40 ft Date 1-2-76
Static level (depth to water) 121
Quality (clear, cloudy, taste, odor) CLEAR
Pump installed by —

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
BROWN CLAY	0 ft	25 ft
LITE SHALE	25	51
LIMESTONE	51	54
COAL	54	55
LITE SHALE	55	72
GRAY SHALE	72	112
LIMESTONE	112	115
COAL	115	116
LITE SHALE	116	126
GRAY SHALE	126	137
LIMESTONE	137	139
SANDY SHALE	139	186
SANDSTONE	186	223

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM McKee Well Drilling DATE 1-2-76
ADDRESS 861 39th SW SIGNED Ted McKee
Canton Ohio

*If additional space is needed to complete well log, use next consecutive numbered form.

CDF004688

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

620668
well log 5

COUNTY Stark TOWNSHIP Canton SECTION OF TOWNSHIP 19

OWNER Edward Moffat ADDRESS 4918 Field Ave S.W. Canton Ohio 44708

LOCATION OF PROPERTY 3151 [illegible]

CONSTRUCTION DETAILS

Casing diameter 7" Length of casing 65 ft

Type of screen 5" Length of screen 150 ft

Type of pump

Capacity of pump

Depth of pump setting

Date of completion

BAILING OR PUMPING TEST
(specify one by circling)

Test rate 15 gpm Duration of test 2

Drawdown 80 ft Date Nov 2-82

Static level (depth to water) 40

Quality (clear, cloudy, taste, odor) clear

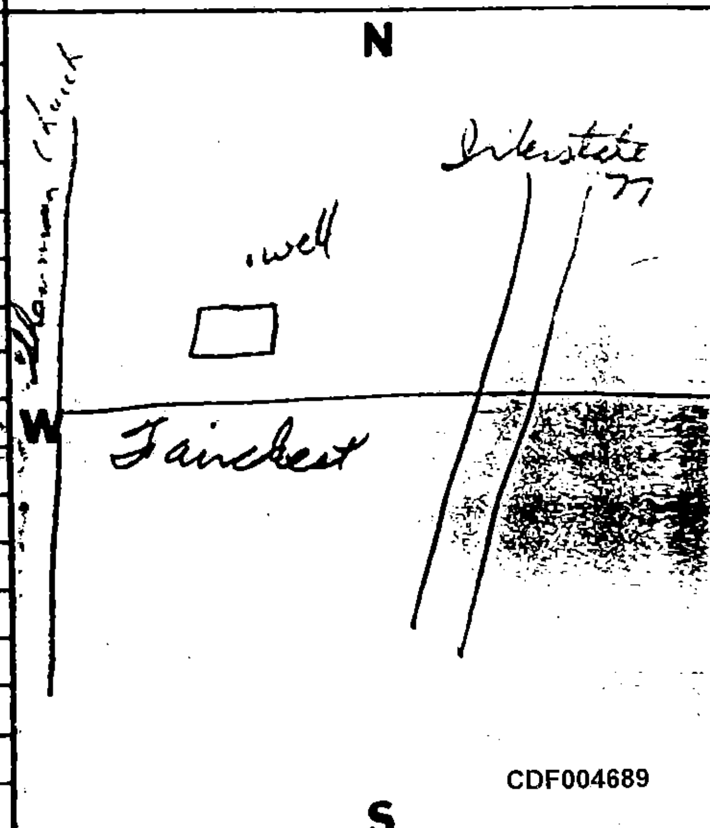
Pump installed by

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
drift	0 ft	30 ft
clay	30	65
broken limestone	65	70
shale	70	120
limestone	120	123
shale	123	175
sandrock	175	205
shale	205	215

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



CDF004689

DRILLING FIRM Williams Well Drilling DATE Nov 2-82

ADDRESS 4765 Swallen Rd Louisville SIGNED Herbert Williams

*If additional space is needed to complete well log, use next consecutive numbered form.

ORIGINAL COPY—ODNR, DIVISION OF WATER, FOUNTAIN SQ., COLS., OHIO 43224

WELL LOG AND DRILLING REPORT

well log 6

ORIGIN...

495890

NO CARBON PAPER NECESSARY– SELF-TRANSCRIBING –

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Geological Survey
Fountain Square
Columbus, Ohio 43224 Phone (614) 466-5344

COUNTY Stark TOWNSHIP Perry SECTION OF TOWNSHIP OR LOT NUMBER Sec. 24

OWNER The Timken Co. Dames & Moore Well No. 7

LOCATION OF PROPERTY Industrial waste ponds south of Gambrinus Steel Mill, Canton, Ohio

CONSTRUCTION DETAILS

Casing diameter 5 1/8" I.D. Length of casing 32 ft.

Type of screen Stainless Steel Length of screen 3 ft.

Type of pump Submersible

Capacity of pump 12 gpm (measured)

Depth of pump setting 34 ft. (bottom)

Date of completion 1/16/80

BAILING OR PUMPING TEST

specify one by circling)

Test rate 12 gpm Duration of test 0.01

Drawdown 10.28 ft Date 1/17/80

Static level (depth to water) 21.72 ft. below ground sur

Quality (clear, cloudy, taste, odor) Clear, becoming muddy just prior to dewatering

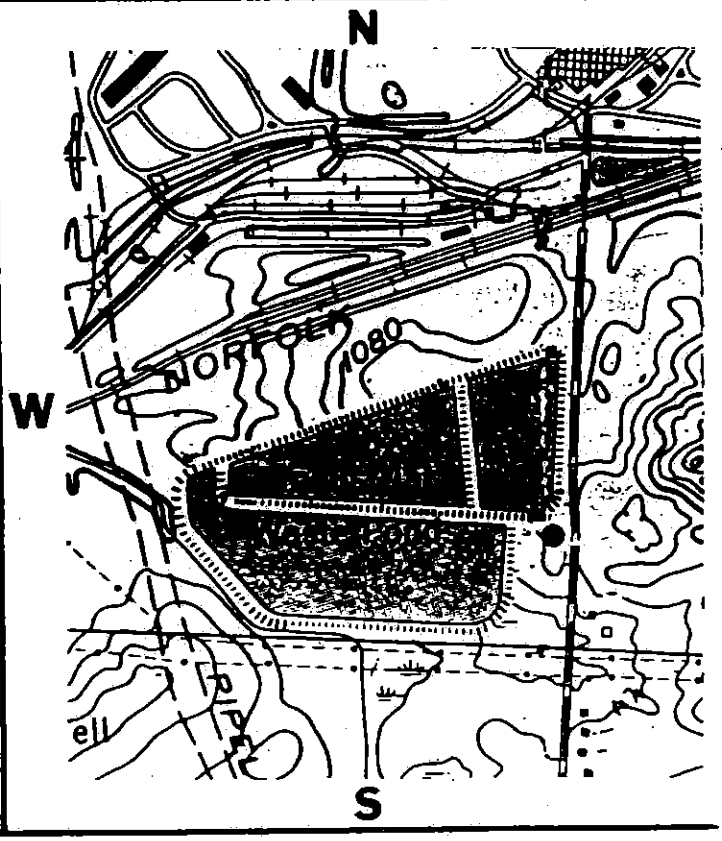
Pump installed by Stockert Drilling Co.

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
Silty clay with some gravel, bricks, wire, foundation of old house (fill)	0 ft	5 ft
Medium to coarse sand and fine to medium gravel, clayey	5	20
Medium to coarse sand with some silt, clayey	20	25
Fine to medium gravel with fine to coarse sand, clayey	25	30
Fine to coarse sand, very clayey	30	34 1/2
Gray clay with fine to medium sand (till)	34 1/2	35

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM Stockert Drilling Co. BY: Dames & Moore

ADDRESS Strasburg, Ohio 44680 Cincinnati, Ohio

*If additional space is needed to complete well log, use next consecutive numbered form.

CDF004690